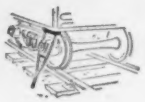
August 6, 1956

What's Happening on the C&NW . . . p. 46

RAILWAY AGE

WORKBOOK OF THE RAILWAYS

THE INDUSTRY'S ONLY WEEKLY NEWSMAGAZINE

"A CURE IS BETTER THAN  A CRUTCH"

Crutches don't cure the Hot Box problem . . . but Timken® bearings do

. . . and TIMKEN bearings pay for themselves over and over and over in operating and maintenance savings

GIVING friction bearings "crutches"—devices attempting to improve performance—never cures the hot box problem. But Timken® bearings *cure* it, because they eliminate the *cause* of hot boxes—the friction bearing itself.

HOW SAVINGS MOUNT

Timken bearings eliminate the frequent inspection and lubrication that are necessary to keep friction bearings operating even with "crutches". Terminal bearing inspection is cut 90%. Lubricant costs are slashed as much as 95%. Fact is, the new Timken heavy-duty type AP (All Purpose) bearing assembly will go three years without the addition of lubricant. Costs less to use and to install too. When all railroads go "Roller Freight", they'll save an estimated $224 million a year, earn about a 22% net annual return on the investment.

The reason Timken bearings eliminate the hot box problem is—they *roll* the load. They don't *slide* it as friction bearings do. There's no metal-to-metal sliding friction. And the reason Timken bearings are the only journal bearings you can count on to cure the hot box problem *and* cut costs to the bone is—their tapered roller design. It prevents lateral movement. There's no scuffing or skewing, bearings last longer. There's no pumping action, so less lubricant is required.

THE TAPER HOLDS THE "SECRET"

We even make our own bearing steel to assure Timken bearing quality. We take this extra step to be sure it's the finest, toughest steel available. No other American bearing maker does.

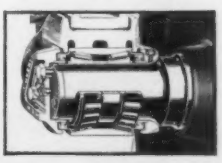
Compared to the cost of buying and maintaining "crutch" devices that never cure, the difference in price between friction bearings and roller bearings is smaller today than ever. Costs can be reduced even more, as shown by a practical conversion plan one major American railroad has adopted. Whenever a freight car of this railroad comes into its shops for major repairs, it is converted to roller bearings. This plan helps maintain a steady shop and labor schedule, reduces bearing installation cost.

CONVERTING THE PRACTICAL WAY

There's no longer any need to try and "get by" with costly "crutches". They don't cure the hot box problem. But Timken bearings *do*—and give maximum savings in operating and maintenance costs. That's why 7 out of 10 roller bearing equipped freight cars roll on Timken bearings. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

7 out of 10 roller bearing freight cars roll on **TIMKEN** tapered roller bearings

TRADE-MARK REG. U. S. PAT. OFF.



MORE THAN HALF A MILLION

UNIT TRUCK

FREIGHT CARS OF EVERY TYPE ARE NOW IN SERVICE. NO SINGLE MECHANICAL ADVANCE HAS EVER RECEIVED INDUSTRY-WIDE ACCEPTANCE SO QUICKLY AND SO COMPLETELY.

Why not protect your switch points too?

Switch points are a major expense, as track materials go. And they take an awful beating, even in yard and siding switches. Wouldn't it make sense to protect your switch points just as you do your frogs?

Here is the low-cost, foolproof tool that's ready and able to do the trick. It is the Bethlehem Switch Point Guard Rail, four-feet-nine-inches of heat-treated toughness specifically designed to take the pounding away from the points (and stock rails, too!).

As you can see, the Switch Point Guard Rail stands higher than either stock rail or point, to shove wheels clear so they can't do any damage. This provides derailment protection, too, against sharp flanges and worn points. Beveled ends ease the passage of the wheels through the switch, softening the shock to car and lading.

This hefty little guard is bolted firmly to the slide plates and braced against lateral thrust. It is reversible for use on either left- or right-hand side of the track. One of our representatives can quickly give you facts and figures to show how soon this switch-point saver pays for itself. A call or note to our nearest office will bring him to any point you say.

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BETHLEHEM STEEL

BETHLEHEM STEEL

Why not use C.T.C. to cut operating expenses?

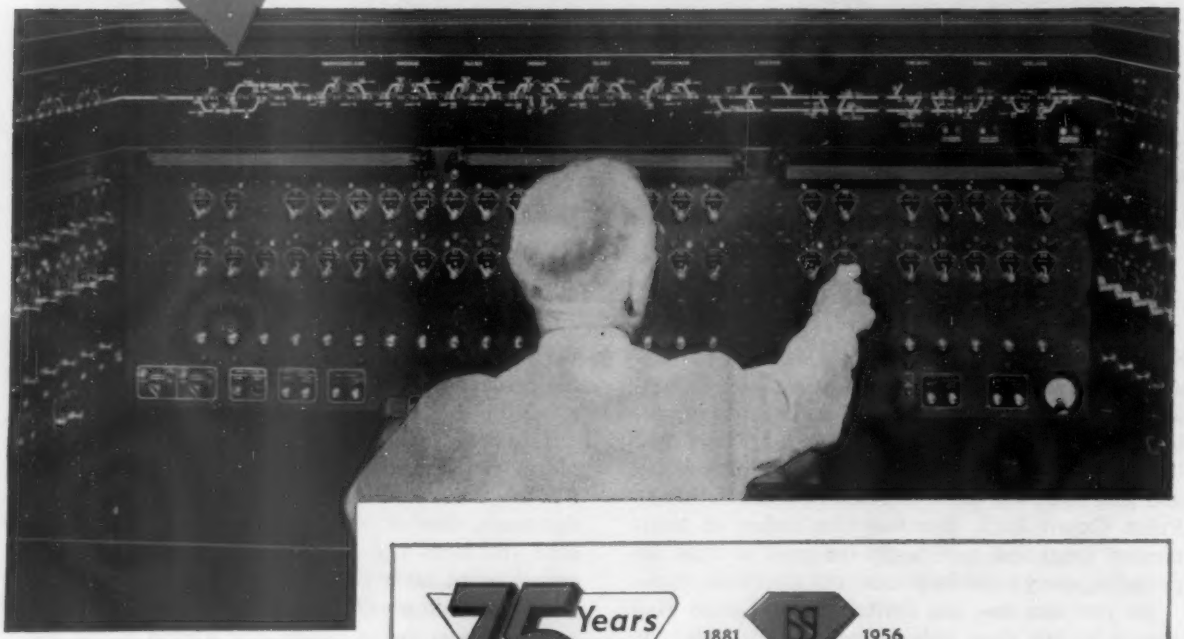
$84,000 saved by reduced overtime payments

Railroads with long stretches of centralized traffic control territory are obtaining some remarkable reductions in operating expenses. For example, one road saved $84,000 by reduced overtime payments alone on one division during the first year's operation with UNION C. T. C.

This road now has 466 miles of single-track main line equipped with C. T. C. . . . making possible a saving of five hours and more for through freight trains operating over the entire territory. And the increase in capacity of existing tracks eliminated traffic bottlenecks which otherwise would have necessitated the construction of a second main track.

C. T. C. has also substantially reduced operating costs since just three sets of dispatchers are required for directing train movements over the territory by signal indication.

UNION C. T. C. pays for itself quickly through reductions in operating expenses. Why not let our traffic control engineers make a survey on your road to determine possible savings. Call our nearest office. There's no obligation.



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UNION SWITCH & SIGNAL

RAILWAY AGE

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Workbook of the Railways

Vol. 141, No. 6
August 6, 1956

CONTENTS and

Week at a Glance

The railway labor picture . . .

. . . as of August 1 is given in a roundup of both the demands of the brotherhoods and the railroad counter-proposals. At issue are "fringe" benefits, basic day rules, stipulated crews and holidays, in addition to the usual "demands" for staggering wage-rate increases. . . . p.7

The $33 billion road program . . .

. . . topped transport legislation enacted by Congress in the session just ended. Dead on the vine were the Cabinet Report bills in Senate and House, since all pending legislation automatically expired with the final adjournment. . . . p.8

"Passenger deficit" inquiry . . .

. . . initiated by the ICC will get under way September 5 at a prehearing conference at Washington. That session will seek to determine procedure to be followed in the proceedings and to consider data and information which should be developed in the case. . . . p.11

FORUM: Unhorsing the socialists . . .

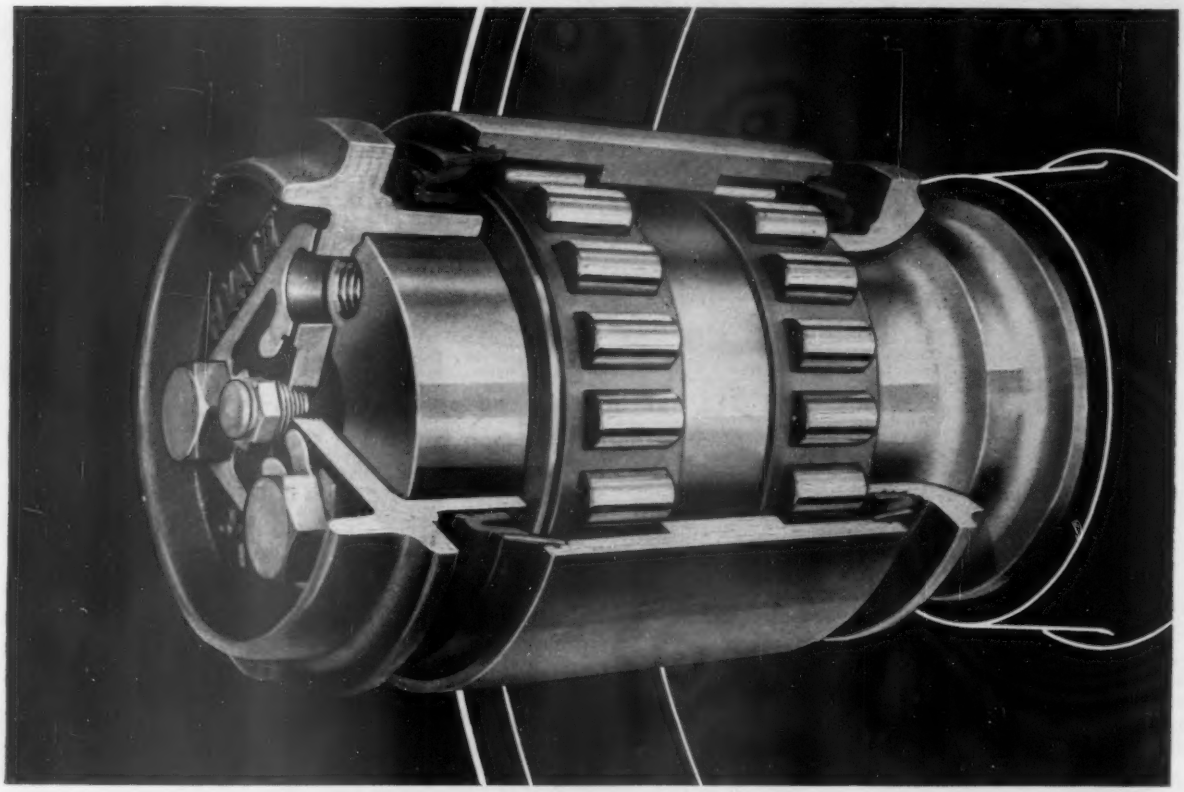
. . . in transportation takes quite a lot of doing, because, among other things, of the difficulty of showing the average man where he personally is affected. The railroads have the public relations talent to meet this challenge, but it appears that that talent has not so far been applied team-wise to the extent required to convince a large enough sector of the public that socialism in transportation exists, and that it's a national—not just an industry—problem. . . . p.39

Key to "safety-mindedness" . . .

. . . is "stick-to-itiveness," starting when a man is hired and never letting up. That's the convincing experience of the Baltimore & Ohio Chicago Terminal, where the record proves the technique works. . . . p.40

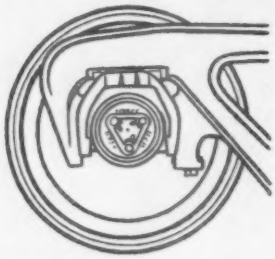
Machine that unloads ties . . .

. . . from cars, either to the right or the left, as fast as they are needed, is proving practicable on the Central of Georgia. Here's another step in applying "automation" to railroad



STRAIGHT CYLINDRICAL ROLLERS have greater capacity, longer life—require less maintenance!

BIGGER FREIGHT LOADS



More Hyatt Roller Bearings are in use on American railroads than any other make

with lower operating costs!

HYATT HY-ROLL BEARINGS offer you big *savings* today—bigger *earnings* tomorrow! *Savings today* because Hyatt's new simplified design reduces both initial cost and maintenance cost. One bearing fits both old and new cars, needs no fitting adjustment. There are only four parts on the axle, all interchangeable. Hyatt Hy-Roll Bearings offer you *bigger earnings tomorrow* because cylindrical rollers have more load-carrying capacity, for a given size, than any other roller shape. What's more, a 3-year sealed-in supply of lubricant means good-bye forever to hotbox delays. *If you're interested in the long haul—better take a long look at Hyatt Hy-Roll!* Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

HYATT

HY-ROLL BEARINGS FOR NON-STOP FREIGHT

Another GM GENERAL MOTORS contribution to railroad prosperity

Current Statistics

Operating revenues, six months	
1956	$5,293,274,781
1955	4,835,326,880
Operating expenses, six months	
1956	$4,040,560,806
1955	3,654,220,154
Taxes, six months	
1956	$559,076,693
1955	523,450,895
Net railway operating income, six months	
1956	$510,512,938
1955	530,456,895
Net income, estimated, six months	
1956	$399,000,000
1955	416,000,000
Average price 20 railroad stocks	
July 31, 1956	105.31
August 2, 1955	95.06
Carloadings revenue freight	
Twenty-nine weeks, 1956	20,674,189
Twenty-nine weeks, 1955	20,105,132
Average daily freight car surplus	
Wk. ended July 28, 1956	22,723
Wk. ended July 30, 1955	5,555
Average daily freight car shortage	
Wk. ended July 28, 1956	4,489
Wk. ended July 30, 1955	15,788
Freight cars on order	
July 1, 1956	129,409
July 1, 1955	27,102
Freight cars delivered	
Six months, 1956	33,189
Six months, 1955	17,111
Average number railroad employees	
Mid-June 1956	1,074,979
Mid-June 1955	1,073,847

RAILWAY AGE IS A MEMBER OF ASSOCIATED BUSINESS PUBLICATIONS (A.B.P.) AND AUDIT BUREAU OF CIRCULATION (A. B. C.) AND IS INDEXED BY THE INDUSTRIAL ARTS INDEX, THE ENGINEERING INDEX SERVICE AND THE PUBLIC AFFAIRS INFORMATION SERVICE. RAILWAY AGE, ESTABLISHED IN 1856, INCORPORATES THE RAILWAY REVIEW, THE RAILROAD GAZETTE, AND THE RAILWAY AGE GAZETTE. NAME REGISTERED IN U. S. PATENT OFFICE AND TRADE MARK OFFICE IN CANADA.

Departments

Current Publications	54
Financial	12
Forum	39
Freight Car Loadings	9
Freight Operating Statistics	52
New Equipment	9
Railroading After Hours	13
Railway Market	9
Railway Officers	13
Supply Trade	12
What's New in Products	16

Week at a Glance CONTINUED

operations—a procedure that's been quietly going on for years without attracting much attention. . . . p.42

What the DL-701's are doing . . .

. . . on a cross-country demonstration tour, with three units working singly or teamed up, is another indication of steady progress in the improvement of the tools the railroads use to produce transportation. . . . p.44

What's happening on the C&NW . . .

. . . since the new management team took over April 1 is told in an exclusive Railway Age interview with Messrs. Fitzpatrick and Heineman. . . . p.46

COMING: Next week . . .

. . . is the first article in a Railway Age series about research in the railroad industry—who is doing it, how it is being done, what the results are, and what it promises for the future.

BRIEFS

"Best salesman of the year" . . .

. . . is the term the B&O applies to a brief, friendly letter which goes to passengers, telling them: "We learned that you journeyed over our railroad recently. We hope that you enjoyed your trip. Your patronage means a great deal to us, and we thank you for it." Replies in "tremendous volume" indicate that the customers appreciate such evidence that railroading isn't purely a mechanical operation.

Increase in tank-car mileage allowance . . .

. . . has been proposed by the AAR board of directors. The proposal is that the allowance be raised from three to four cents per mile, and the board ordered the matter submitted to the railroads by letter ballot.

Surging air travel . . .

. . . since 1950 is indicated by Civil Aeronautics Administration figures reporting that, although it took domestic air lines 24 years to carry their first 100 million passengers (up to 1950), they carried their 200 millionth rider in 1954 and their 300 millionth on July 29 this year.

The Engineer's Report

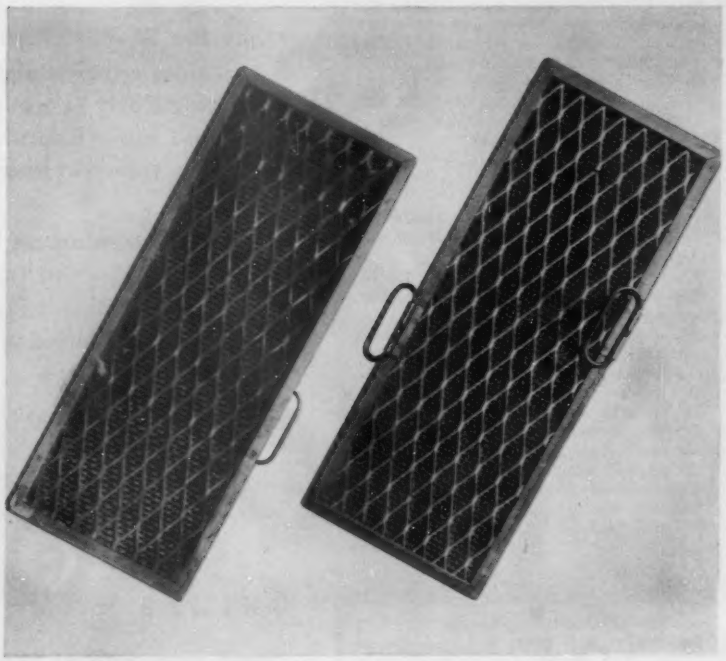
CASE HISTORY

PRODUCT *Calol Filter Coat*

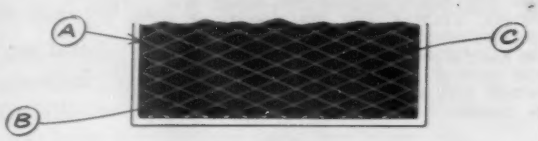
FIRM *Bamberger Railroad Co., Salt Lake City, Utah*

Adhesive filter coating keeps dirt out of engines!

CALOL FILTER COAT prevents dirt from coming through air filters on the Bamberger Railroad Co.'s locomotives, even though heavy, salt-laden dust blows almost constantly along a portion of their Ogden to Salt Lake City right-of-way. Car-body filter at right shows dirt collected in only 30 days on this run. Interior side of same filter, far right, is clean, showing that dirt was trapped in the filter. With ordinary oil coatings, dirt got into engines and caused extra wear—engines had to be overhauled every year. "Since using Calol Filter Coat, none of our engines has been overhauled in a year and a half," says J. F. Buckley, Master Mechanic. "Inspections show much less wear on cylinders. Engine compartments stay so clean now that dust entering any tiny crack shows as a definite streak on the floor." No drip pans are used with Calol Filter Coat because it always stays in place. It increases the efficiency of all their impingement-type air filters.



How Calol Filter Coat Ups Efficiency of all Impingement-type Air Filters



A. Will not drip off or flow from screens—full amount applied remains over the entire service period with sustained high filtering efficiency at all ambient temperatures. Easily applied by conventional methods.

B. Has high wicking ability—quickly soaks through dirt particles in all air velocities and extreme dust concentrations.

C. No loss from contact with rain or snow, filters are easily cleaned with usual hot-water-detergent solutions.

FREE CATALOG: "How to Save Money on Equipment Operation" will be sent on request to Standard Oil Company of California, 225 Bush St., San Francisco.

FOR MORE INFORMATION about this or other petroleum products of any kind, or the name of your distributor, write or call any of the companies listed below.

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DEMANDS AND COUNTER-PROPOSALS . . .

Wage Cases—Who Wants What?

With wage and working rules demands for 1956 now served on the railroads by most of the brotherhoods, and counter proposals having been filed by the carriers, here is the rundown on major cases pending as of August 1:

Brotherhood of Locomotive Firemen & Enginemen: On January 30 the BLF&E filed for a $3 a day increase, plus a company-financed hospital, surgical and medical benefit plan.

The railroads countered this demand by proposing elimination of all rules requiring the employment of firemen on other than steam power, and, in addition, that carriers be given the right "to determine when and if a fireman shall be used on other than steam power."

The carriers proposed further that existing pay gradations based on weight on drivers be eliminated and that when a fireman is used his rate of pay be the present minimum in each class of service. They also proposed that the basic day of passenger firemen be 180 miles or 6 hours, and of through freight firemen, 160 miles or 8 hours.

The BLF&E represents about 50,000 firemen—26,000 in road service and 24,000 in yard service. According to ICC statistics, road firemen now average $542 a month and $6,506 a year, while yard firemen average $446 monthly and $5,351 a year.

Latest development in the BLF&E case was a preliminary railroad-union meeting at the national level on July 26. Next session has been set for September 5.

Brotherhood of Railroad Trainmen: The BRT filed demands on February 15 for a $3 increase per basic day and paid holidays. In addition to this $3 boost, the union also demanded an extra $2.50 a day for members in short-turn service.

The carriers in turn proposed that the basic day rules be revised to provide that 160 miles or 8 hours shall constitute a day's work in through freight service (instead of 100 miles or 8 hours); and, in passenger service, 240 miles or 8 hours (instead of 150 miles or 7½ hours).

The roads also proposed that basic daily rates of yard workers be reduced 24 cents to correct "erroneous conclusions and recommendations" of a past Presidential emergency board; and that rules or agreements which require a stipulated crew consist in all freight, passenger and yard service be eliminated.

The BRT represents about 121,000 employees, including 54,000 in road service and 67,000 in yard service. At present, road trainmen average $514 a month; road conductors $638 a month and yard conductors and brakemen $430 a month.

A preliminary session at the national level was also held with the BRT on July 26 and the meeting was recessed "to meet again shortly."

Switchmen's Union of North America: SUNA's demand for a 25% wage hike and paid holidays (straight time when not worked and 2½ times pay when required to work) was filed with the carriers on March 31.

The railroads proposed that all rules or agreements be eliminated which require a stipulated crew consist in yard service; and also a 24-cent per day pay decrease along

PRR Chief Looks Over Pioneer III Lightweight Truck

Edward G. Budd, Jr., Budd Company president, shows air spring of lightweight truck used on new Pioneer III cars to James M. Symes, Pennsylvania president, during showing of new lightweight equipment at Waldorf Astoria Hotel in New York City. Features of new train were reported in detail in article in Railway Age, July 23, p. 38.

lines of that proposed in the BRT case.

SUNA represents about 8,000 yard workers, mostly on railroads in Western territory.

Order of Railway Conductors & Brakemen: On July 2 the ORC&B demanded a 25% wage hike for its 20,000 members. The union also filed for an added 20% increase, over and above the 25% demand, for "all minimum paid passenger assignments whose work opportunity is confined to 150 miles per day" and for all "local, road switcher and mine run assignments whose work opportunity is confined to 100 miles or less, 8 hours or less."

The railroads counter-proposed that the basic day of through freight conductors be changed from 100 miles or 8 hours to 160 miles or 8 hours. For passenger conductors, they proposed to change from 150 miles or 7½ hours to 240 miles or 8 hours.

In addition, the carriers proposed the elimination of all rules or regulations, of any kind, which require a stipulated crew consist in all classes of road freight and passenger service.

According to ICC figures, road freight conductors now have average earnings of $631 a month and $7,574 a year; and road passenger conductors, $655 a month and $7,857 a year.

Brotherhood of Locomotive Engineers: As of August 1 the BLE had filed no national demands.

Non - Operating Employees: Demands for a 25-cent hourly wage increase were filed June 20.

The railroads proposed a 6½-cent per hour wage decrease, again to correct "erroneous conclusions and recommendations" made by a Presidential emergency board.

The non-op unions represent the largest single group of railroad employees, amounting to about 728,000.

BLFE JOINING AFL-CIO

Another pending development in railway labor is the plan of the Brotherhood of Locomotive Firemen & Enginemen to affiliate soon with the AFL-CIO.

The step, authorized by previous membership convention action, was voted favorably last month by the BLFE general policy committee.

Anticipated procedure is for BLFE President H. E. Gilbert to make formal application for admission to the recently merged AFL-CIO and to carry out whatever other actions may be required.

Congress Did Little for RRs in 1956

Approved $33 billion road project—Restricted ICC's power to ban trip-leasing—Let rate-freedom program die

Approval of the $33 billion highway program was the principal transport legislation enacted by Congress at its 1956 session which adjourned July 27. Since it was the Eighty-Fourth Congress' final adjournment (in the absence of a special session), all bills pending at various stages short of enactment died with the session.

The dead bills include those to implement recommendations of President Eisenhower's Cabinet Committee on Transport Policy and Organization. Those bills embodied the rate-freedom program which was given top priority by the railroad industry.

Trip-Lease, RRA Benefits— Meanwhile, the session brought enactment of the truck-trip-lease bill, which was opposed by the railroads, and of legislation providing for a 10% increase in benefits under the Railroad Retirement Act on which the railroads took no position. Also enacted was legislation which will authorize the railroads to carry a disabled person requiring an attendant and such attendant at the fare charged for one person.

Some proposals opposed by the railroads failed of enactment. These included the proposal to eliminate government agencies from the Interstate Commerce Act's list (in section 22) of those eligible to receive rate concessions. Section 22, which permits (but does not require) such concessions, is a rate-freedom provision, affording carriers freedom to compete for government traffic.

Penalty per diem bills also died with the session. Some railroads opposed and others favored those bills which would have authorized the Interstate Commerce Commission to use the freight-car-rental rate as an instrument to promote the prompt movement of freight cars.

Dead also is the section 4 liberalizer favored by the ICC—and by the railroads as a desirable change, although they still want the section repealed. The commission proposal would amend the section to permit railroads having circuitous routes to meet the competition of direct routes by publishing rates involving fourth-section "departures" without prior approval of the commission. This would limit the commission's fourth-section power to relief over direct routes.

The highway legislation included provisions for additional taxes, proceeds to be applied to costs of building the roads. The user-charge plan of financing advocated by the railroads, was thus adopted, but proceeds from the new taxes may fall short of the program's costs. The program contemplates 13 years of work on the so-called Interstate Highway System, a 41,000-mile network linking most cities of more than 50,000 population.

The Cabinet Report bills were killed some time before the session's end, when the House Committee on Interstate and Foreign Commerce decided to take no action on them. This committee had held comprehensive hearings on the proposed legislation but no hearings were held by the Senate Interstate Commerce Committee on the like Senate bill.

At the House Committee hearings, the railroads got an opportunity to state their case for more rate freedom—just about all they had been expected to get at the hands of this election-year Congress (Railway Age, Jan. 9, p. 142). The rate-freedom proposals are controversial, being vigorously opposed by other agencies and the ICC. On the other hand, they are favored by shipper interests, including the National Industrial Traffic League.

The trip-lease legislation trims the ICC's regulatory authority over

(Continued on page 10)

RAILWAY MARKET OUTLOOK THIS WEEK

a RAILWAY AGE Workbook Page

Carloadings Up Slightly.—Loadings of revenue freight in the week ended July 28 totaled 649,806 cars, the Association of American Railroads announced on August 2. This was an increase of 1,314 cars, or 0.2%, compared with the previous week; a decrease of 140,620 cars, or 17.8%, compared with the corresponding week last year; and a decrease of 33,811 cars, or 4.9%, compared with the equivalent 1954 week.

Loadings of revenue freight for the week ended July 21 totaled 648,492 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday July 21

District	1956	1955	1954
Eastern	108,092	131,778	111,964
Allegheny	105,179	153,812	123,668
Pocahontas	61,341	64,286	48,621
Southern	124,263	118,329	112,420
Northwestern	72,969	131,363	114,469
Central Western	118,860	123,738	117,481
Southwestern	57,788	58,602	55,658
Total Western Districts	249,617	313,703	287,608
Total All Roads	648,492	781,908	684,281
Commodities:			
Grain and grain products	62,448	69,473	63,482
Livestock	6,881	5,398	6,869
Coal	134,224	130,675	106,877
Coke	4,298	12,248	6,939
Forest Products	48,540	46,978	37,663
Ore	16,948	83,090	71,511
Merchandise l.c.l.	56,178	67,364	59,161
Miscellaneous	318,975	366,682	331,779
July 21	648,492	781,908	684,281
July 14	619,988	794,138	694,545
July 7	478,297	648,992	569,562
June 30	755,292	695,841	618,559
June 23	799,461	794,427	713,160
Cumulative total, 29 weeks	20,674,189	20,105,132	18,450,214

In Canada.—Carloadings for the seven-day period ended July 14 totaled 95,626 cars, compared with 81,684 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
July 14, 1956	95,626	30,524
July 14, 1955	87,181	29,716
Cumulative Totals:		
July 14, 1956	2,279,066	954,712
July 14, 1955	2,051,957	867,386

New Equipment

FREIGHT-TRAIN CARS

► *Bangor & Aroostook.*—Directors have authorized purchase of 500 box cars "to protect the company's valuable paper traffic."

► *Central of Georgia.*—Ordered five 70-ton drop-end gondolas from Greenville Steel Car Company; base price, $9,400 each; delivery in fourth quarter.

► *Repair Ratio Better.*—There were 39,571 fewer cars waiting repairs on Class I roads June 1 than a year ago that date, a 2.3% improvement in repair ratio, AAR reports:

	June 1, 1956	June 1, 1955	Change
Ownership*	1,700,603	1,719,709	19,106 (d)
Waiting Repairs	70,149	109,720	39,571 (d)
Repair Ratio	4.1%	6.4%	2.3% (d)

*Excludes railroad-owned private refrigerator cars.

Purchases and Inventories

► *Five Months' Purchases Up $197.3 Million.*—Purchases by domestic railroads of all types of materials in first five months of 1956 were $197,275,000 above those for the same period last year: Railway Age research department prepared following tables:

PURCHASES*	May 1956	Five Months 1956	Five Months 1955
	(000)	(000)	(000)
Equipment**	$ 19,043	$ 199,646	$205,554
Rail	8,588	46,313	41,979
Crossties	7,156	32,759	22,178
Other Material	119,746	565,031	376,023
Total from Manufacturers	$154,533	$ 843,749	$645,734
Fuel	36,770	186,140	186,880
Grand Total	$191,303	$1,029,889	$832,614

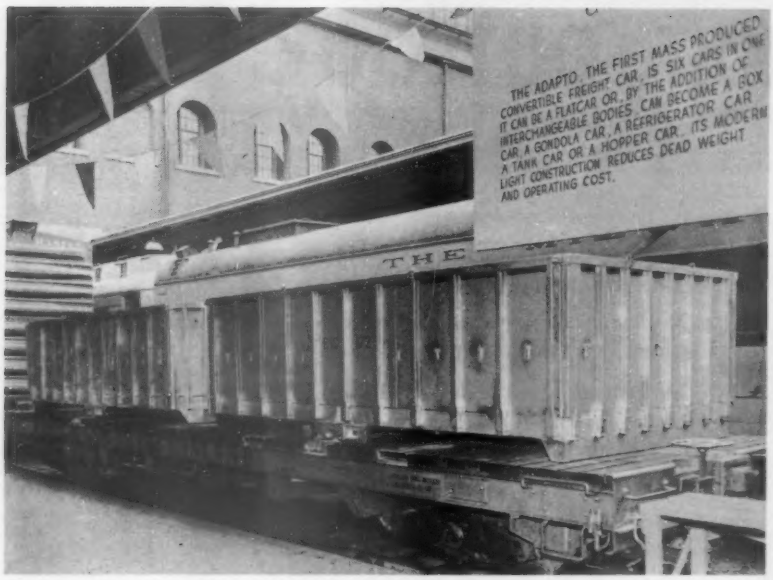
*Subject to revision.
**Estimated value of orders.

INVENTORIES*†	May 1, 1956	May 1, 1955
	(000)	(000)
Rail	$ 57,734	$ 54,054
Crossties	95,224	105,790
Other Material	528,479	482,598
Scrap	21,098	17,933
Fuel	27,845	31,865
Total	$730,380	$692,240

*Subject to revision.
†All total inventory figures taken from ICC statement M-125 for month indicated.

New Facilities

► *Seaboard Air Line.*—Launched $1,500,000 development program near Brooksville, Fla., including construction of new classification yard in anticipation of increasing freight from expanding rock mining operations; yard will be two miles long, and will have 14 miles of track with total capacity of 1,237 cars.


THE ADAPTO, THE FIRST MASS PRODUCED CONVERTIBLE FREIGHT CAR, IS SIX CARS IN ONE IT CAN BE A FLATCAR OR, BY THE ADDITION OF INTERCHANGEABLE BODIES, CAN BECOME A BOX CAR, A GONDOLA CAR, A REFRIGERATOR CAR A TANK CAR OR A HOPPER CAR. ITS MODERN LIGHT CONSTRUCTION REDUCES DEAD WEIGHT AND OPERATING COST.

First Adapto Cars Delivered to Rock Island

The Rock Island is now taking delivery of first of new 38-ft Adapto flat cars to be used in road's Convert-A-Frate service (Railway Age, Jan. 23 p. 7). Built by ACF Industries, initial cars are equipped with gondola-type boxes (above) which lock to car floor with automatic latching device. Other cars will handle 17-ft boxes having both side and end doors. In pick-up and delivery service, boxes, gondolas or other containers from cars can be transported by truck for highway leg of movement.

(Continued from page 8)

the leasing of motor vehicles by highway carriers. The trimming is an ending of the commission's power to ban trip-leasing of "farm trucks" for journeys toward home from points to which they haul agricultural products and other commodities exempt from regulation under the Motor Carrier Act's so-called "agricultural exemptions."

Actually, this does not change the situation which the commission proposed to bring about administratively. Its pending leasing rules have a general requirement that truck leases be of 30 days duration, but then exempt "farm trucks" from that requirement. That phase of the leasing rules has never been effective, having been postponed from time to time while the legislation was pending.

The pension liberalizer is considered as only an interim measure by the railroad labor organizations which sponsored it. It was enacted in the session's closing days after the House Ways and Means Committee refused to approve a more liberal proposal calling for a 15% increase in benefits and exclusion of payroll taxes paid by railroad employees from their taxable income.

The legislation which passed makes no provisions for increasing the payroll taxes which support the retirement system, but Chairman G. E. Leighty of the Railway Labor Executives Association has said that the association proposes to take care of that next year. Financing arrangements it will propose at that time will also be designed to provide for further liberalization of the retirement plan, Mr. Leighty said.

Other legislation enacted raises salaries of goverment officials, including members of the ICC, Railroad Retirement Board and National Mediation Board. Chairmen of those agencies will be paid $20,500 annually and other members $20,000. All now receive $15,000 a year.

DL&W T-O-F-C Extension

Effective August 15, the Lackawanna's piggyback service will be extended to include the Binghamton, N. Y.,—Johnson City area. Service to and from these points will include most other locations now served by the railroad and its connections.

Gradual Return to Work Follows Steel Strike End

With resumption of steel production due following a month-long shutdown because of an industry-wide strike, railroads were gradually returning to normalcy as this issue of Railway Age went to press.

As carloadings pick up and sources of steel for car building and maintenance projects resume operations, thousands of furloughed employees are to be recalled to work as they are needed.

A threat to be faced at the end of last week, however, was a spreading strike in the aluminum industry.

One factor saving railroads from more harmful effects of the steel strike was that for the first 10 days of the strike it coincided with the annual coal miners' holiday, a period already compensated for in railroad plans.

A Correction—The report on the effect of the strike on the railroads in Railway Age, July 16, p. 7, erroneously stated that the Virginian's traffic had been cut 25%. This report should have been attributed to the Pittsburgh & West Virginia. F. D. Beale, president of the Virginian, said that although some coal mines served by his road did not operate after the coal miners' holiday ended July 10, coal shipments to tidewater had been "somewhat above normal and the Virginian's revenues have not been adversely affected by the strike."

Magnuson Fails to Get Demurrage Hike Delayed

The railroads have rejected Senator Magnuson's suggestion that they postpone the pending increase in demurrage charges until a decision is made on the matter of changing the per diem rate.

The chairman of the Senate Committee on Interstate and Foreign Commerce made his suggestion in a recent letter to President William T. Faricy of the Association of American Railroads (Railway Age, July 30, p. 5). It was rejected by the AAR president in a July 28 letter.

The Faricy letter said that the AAR board of directors had considered the matter and "by unanimous action . . . decided not to delay further our efforts to make the proposed increases [in demurrage rates]

effective September 1." Tariffs publishing the increases on that basis are now on file at the Interstate Commerce Commission.

As to the per diem rate, Mr. Faricy said the senator was correct in his information that a study is now under way for the purpose of determining whether the present rate of $2.40 per day should be changed. At the same time, the AAR president also had this to say: "Whether the present per diem rate is or is not reasonably compensatory, the fact is that it represents an increase of 60% since the present demurrage rates were fixed on September 1, 1949."

CNR Slates Transport Study for Newfoundland

Possible integration of highway, rail and coastwise steamship transport will be explored in a study of Newfoundland's transportation needs by the Canadian National.

A team of officers has been appointed by the road to make the study which will examine the adequacy of the province's existing rail and steamship services in light of the economic expansion in recent years, the CNR announced. Consideration is to be given to future requirements in transport facilities to keep pace with anticipated growth. Part of the study will deal with the effect of present and contemplated road construction on existing transportation services.

The study team includes W. P. Moffat, chief of research, Montreal; H. C. Grayson, formerly manager of Newfoundland Railways and now on special assignment at Montreal; and Captain M. G. Dalton, special assistant to manager, and W. D. Tilley, assistant to marine superintendent, both of St. John's, Newfoundland. They will work with E. J. Cooke, manager, Newfoundland district.

Dry-Type Rectifiers for British Electrification

British Railways are now utilizing germanium rectifiers on m-u cars for converting alternating current from an overhead wire to direct current for driving traction motors.

A special train has been equipped with such rectifiers, and is in operation on the recently modernized Lancaster-Morecambe-Heysham line.

RRs in Limelight in "Empire Builder" Celebration

Dollar and cents importance of railroads to economy of community of St. Paul is illustrated by panel (above) which was displayed in Great Northern exhibit in First National Bank of St. Paul during festivities marking 100th anniversary of James J. Hill's arrival there. Whole city joined in celebration honoring GN founder traditionally hailed as "Empire Builder."

ICC Seeks Advice on "Deficit" Inquiry

The Interstate Commerce Commission's investigation of the deficit from railroad passenger-train operations will get under way September 5 at a pre-hearing conference in Washington, D. C. The investigation, docketed as No. 31954, was instituted by the commission on its own motion last March.

The pre-hearing conference, before Examiner Vandiver, will be for the purpose of considering information and data which should be developed in the case. It will also consider procedures to be followed, i.e., whether proceedings will involve submission of verified statements by interested parties or oral hearings, or both.

Subjects suggested by the commission for consideration at the conference are these:

1. Historical development of the Commission's present rules governing separation of operating expenses between freight and passenger-train service; investigation of "direct charges" and allocation of common expenses required by such rules; whether, and in what manner and extent, such rules should be changed.
2. A cost study to determine what part of the passenger deficit is attributable to the various kinds of passenger-train service. (To be furnished by carriers.)
3. A survey of the number of trains operated and the number of passengers carried on each train during a representative period. (To be furnished by carriers.)
4. A review of the present and past rate structures to determine what has been the effect on gross and net passenger train revenue of any changed rate levels—either increased or decreased.
5. Determination of the factors which affect the rate structures of airlines and buslines which are advantageous to these carriers as contrasted with the rail passenger rate structure.
6. An overall determination of the factors, other than rate levels, which tend to make passenger train operations profitable or unprofitable, in relation to motor bus and air passenger operations.
7. The effect of suburban development and the private automobile on the passenger deficit.
8. Studies of the political and economic forces exerted upon the railroads to maintain commutation service and of the corresponding obligation of the public with respect to such service.
9. Study of the extent, amount and

effect of federal, state and local taxation on passenger-train service, equipment, and facilities, including excise taxes.

10. Cost of constructing, maintaining and operating railroad passenger terminal facilities and the influence thereof on the passenger-train service deficit.

11. The extent and competitive effect of: (a) Direct and indirect federal, state, and local aid. (b) Governmental policies with respect to passenger and headend traffic.

12. An analysis of the difficulties encountered by carriers in discontinuing trains and in the abandonment of lines, stations and agencies.

13. Railroad passenger train service and facilities in relation to the needs of the national defense.

14. A study of equipment depreciation schedules in relation to obsolescence and modernization of passenger train equipment.

15. Studies of what railroad management has done and plans to do in the way of improvement of equipment and service and the effect thereof on volume of passenger traffic.

June Net Down $11 Million

Class I railroads in June had estimated net income, after interest and rentals, of $77 million, according to the Bureau of Railway Economics of the AAR, whose report is summarized in the accompanying table.

This was a decrease of $11 million below the $88 million reported for June 1955. The estimated net income for this year's first six months was $399 million, down $17 million from the $416 million reported for 1955's first half.

June's net railway operating income, before interest and rentals, was $94,980,853, down $11¾ million from the June 1955 figure of $106,780,581. The six-months net railway operating income was $510,512,938, compared with $530,456,895.

Thirteen Class I roads failed to earn interest and rentals in this year's first six months. The rate of return for the 12 months ended with June averaged 4.13%, compared with 3.98% for the 12 months ended with June 1955.

	1956	1955
Month of June		
Total operating revenues	$ 900,465,909	$ 878,350,933
Total operating expenses	686,410,493	646,779,081
Operating ratio—percent	76.23	73.64
Taxes	96,728,965	101,672,019
Net railway operating income (Earnings before charges)	94,980,853	106,780,581
Net income, after charges (estimated)	77,000,000	88,000,000
Six Months ended June		
Total operating revenues	$5,239,274,781	$4,835,326,880
Total operating expenses	4,040,560,806	3,654,220,154
Operating ratio—percent	77.12	75.57
Taxes	559,076,693	523,450,895
Net railway operating income (Earnings before charges)	510,512,938	530,456,895
Net income, after charges (estimated)	399,000,000	416,000,000

Financial

Canadian National. — *Trims 17 Subsidiaries.*—Canadian National has announced amalgamation of 17 wholly owned subsidiaries under the name of Canadian National Railways Company, as another step in simplifying the road's corporate framework. Companies losing their corporate identities are: the Stanstead, Shefford & Chambly; Montreal & Vermont Junction; Canadian Northern; Canadian Northern Alberta; Canadian Northern Ontario; Canadian Northern Consolidated; Canadian Northern Steamships; Canadian Northern Railway Express; Canadian Northern System Terminals; Grand Trunk Pacific Railway and its subsidiaries; Grand Trunk Pacific Branch Lines; Grand Trunk Pacific Saskatchewan; Grand Trunk Pacific Development Company; Grand Trunk Pacific Terminal Elevator; Manitoba Northern; Niagara, St. Catharines & Toronto Navigation; and the Pembroke Southern.

New York, New Haven & Hartford.—*Five-Year Contract for Alpert.*—Stockholders of this road have approved a five-year contract at $60,000 a year for George Alpert who became president January 20. An additional $25,000 a year will be paid for 12 years after the contract period as "deferred compensation," the New Haven announced, stating that Mr. Alpert "had assumed duties covering salaries of $150,000 per annum received by former president Patrick McGinnis and titular heads of subsidiary companies."

Dividends Declared

ATLANTIC COAST LINE.—50¢, quarterly, payable September 12 to holders of record August 13.

LOUISVILLE & NASHVILLE.—$1.25, quarterly payable September 12 to holders of record August 1.

NEW YORK CENTRAL.—50¢, quarterly, payable September 10 to holders of record August 17.

NEW YORK, CHICAGO & ST. LOUIS.—new common (initial), 45¢, payable October 1 to holders of record August 31.

PEORIA & BUREAU VALLEY.—$2.12½, semi-annual, payable August 10 to holders of record July 31.

Supply Trade

Oilpure Refiner Company has appointed **C. Raymond Ahrens, Inc.,** 30 Church street, New York, as authorized distributor of the Oilpure refiner to all domestic railways.

Van der Horst Corporation has appointed **Frank L. Jorstad** sales engineer for midwest territory, with office in Chicago.

OBITUARY

Philip Arnold, 73, retired vice-president, Garlock Packing Company, died July 3 in Carmel, Cal.

E. T. Wade, southern representative for Davis Brake Beam Company, died July 10 at Richmond, Va.

Straight and True

Security analysts look on in background during recent tour of Erie facilities as Assistant Track Foreman Rudy Nedelka (foreground) sights track during demonstration of track jack. Purpose of analysts' tour was to show them how Erie had invested $165 million in last 10 years to modernize and strengthen its property.

Railway Officers

ATLANTIC COAST LINE.—Dr. Joseph C. Bunten, surgeon at Rocky Mount, N. C. Coast Line hospital, appointed chief surgeon for the ACL at Wilmington, N. C.

Colonel J. Monroe Johnson appointed executive assistant, Washington, D.C.

CANADIAN PACIFIC. — R. Christie appointed division master mechanic, Montreal Terminals, succeeding **G. E. Bales.**

G. E. Mayne, general manager, Prairie region, Winnipeg, Man., appointed vice-president of that region, succeeding **C. E. Lister,** who retires July 31. **Trevor Wood,** general superintendent, Manitoba district, Winnipeg, appointed general manager, Prairie region at that point, succeeding Mr. Mayne. A photograph of Mr. Wood was published in Railway Age, June 13, 1955, p. 75. **L. R. Bangs,** superintendent, Smiths Falls, Ont., named general superintendent, Manitoba district, Winnipeg. **E. Finnie,** assistant superintendent, Winnipeg, transferred to Calgary, Alta., succeeding **W. R. McCracken,** promoted to superintendent, Bruce division, Toronto. **J. A. Tolley,** assistant superintendent, Minnedosa, Man., transferred to Winnipeg. **R. F. P. Bowman,** general manager, **Pacific Great Eastern,** Vancouver, B. C., named assistant superintendent, CPR, Minnedosa.

K. A. Truman, district engineer, Alberta district, Calgary, appointed assistant engineer maintenance of way, Prairie and Pacific regions, Winnipeg, succeeding **G. B. Alexander,** re-

(Continued on page 49)

G. E. Mayne

L. R. Bangs

W. R. McCracken

Railroading

After Hours

As It Was

by James G. Lyne

Editor, Railway Age

I had a good visit during the course of a train ride the other day with E. V. Hill, chairman of the Eastern Traffic Executives Committee. I knew he was an alumnus of the Rock Island, as I am, but I didn't realize that his father also, as was mine, was a Rock Island conductor and that Ed started working, as I did, in a car foreman's office.

We got to telling each other of our recollections of our fathers—how little money they were paid, and the long hours of hard work they put in—compared to those of today's trainmen. But the job, aside from the accident hazard, was healthy—both men lived long lives.

Those were the days when 10 hours were equated to 100 miles (before the Adamson law); and crews got their pay by hours as often as by miles. Freight crews, if a draw-bar was pulled out, chained the car behind the caboose and took it to the next terminal. If a car needed to be rebrassed out on the line, the train crew did it.

The crew checked the cars in the train, recording car numbers and seal numbers, and coupled up the air-hoses, before leaving the terminal; and no "preparatory time" was paid either.

Ed Hill told me about his service as a yard clerk—and how, now and then, they'd get him out for extra duty; and, of course, in those days nobody whose salary was on a monthly basis, rather than hourly, ever got paid for overtime. There are some people who think of the period before World War I as the "good old days," but nobody who works for a living on the railroads can rate them that way.

There are plenty of railroaders today, of course, who put in a lot more hours than they're paid for—doing things connected with their jobs, but that's usually because they want to, rather than because they have to; and not having to makes a lot of difference.

School Days

There are probably more railroad men—officers and supervisors especially—going to school now than ever before. One of the recent new developments in this area is a "middle management" summer course at Stanford University, sponsored by the Southern Pacific—and open to middle management people from all types of transportation. At the start of the program at the end of June, President D. J. Russell of the S.P. delivered an informative address on "The Need for Executive Training." I have received a printed copy of this from the S.P.'s Jim Shea—and probably copies are available for others with an active interest in the subject.

Mr. Russell observes that there is no one type of successful business leader—they come in "as wide a range of personalities as they do shapes and and sizes." The trait most of them seem to have in common is "ability to grasp specific situations quickly and relate them to broad, long-range considerations."

"New Bonus-Powered International®

give work-speeding capacity..new

Over 132,000 cubic yards of hard, dry clay to move—cuts as deep as 35 feet to excavate—fills that run from 25 to 40 feet deep—on this tough job near Sioux City, Iowa. Two new International 55 Payscrapers, push-loaded by TD-18 crawler, replaced two crawler-scraper units here on short-haul cut-and-fill work, with these big results:

"The two new 55 Payscrapers have jumped our daily yardage 1500 yards—*80% or better*—compared to crawler-scraper units replaced," reports Owner William C. Grady, LeMars, Iowa.

"The new 55's have proved that even on very short hauls, their rubber-tired speed pays off. Now, our same manpower

"Years of excellent performance from our International crawler fleet, backed by fine service, helped our company grow to a fleet of 11 International crawlers," states Nor-Vel Construction Co., Ferguson, Mo. Here's two of their TD-24's, helping move wet clay on a large Black Jack, Mo., job.

Walter H. Knapp, Inc., Milwaukee, Wisconsin, railroad contractor makes fast, low-cost work of tie-handling—even in tough, snowy conditions—with an International Drott TD-9 equipped with Skid-Grapple. Exclusive top grab arm gives positive load control!

"Short-haul yardage soars"

outfits . . . . operating ease"

moves practically double our former yardage. Loading averages 42 seconds in dry, hard-packed clay. Easy operation and plenty of power make new Payscrapers the operators' favorites."

"I can rip up concrete with pry-action breakout—without strain on the crawler," declares J. E. Johnson, Knoxville, Tenn., of his new bonus-powered TD-9 Drott Skid-Shovel. "Best grading loader I've operated. Has no-strain steering, fine job vision."

"No busy season downtime," says Ralph Jordan, crusher superintendent, Asphalt Paving Company, Wheatridge, Colorado—of International Power Unit performance. "I prefer them—they're easiest to maintain." A Model U-450 powers their Barber-Greene hot-mix plant; another unit crushes 1,500 tons of gravel daily; a TD-18 dozer controls stockpiles.

A railroad that skirts the Atlantic coast owns this International TD-9 crawler—shown grading an 8-mile embankment with Bull-grader for track-extension construction near Sanderson, Florida. Outfit was also used for stump-removal on new right-of-way.

Prove bonus-powered International equipment performance for reducing grades, removing landslides, daylighting curves, handling ties, loading ballast, building spur lines—for all kinds of off-track duties. See your nearby International Construction Equipment distributor for a demonstration.

See you at the ROAD SHOW—CHICAGO Jan. 27 to Feb. 4, 1957

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A COMPLETE POWER PACKAGE INCLUDING: Crawler, Wheel, and Pipe-Boom Tractors . . . Self-Propelled Scrapers and Bottom-Dumps . . . Crawler and Rubber-Tired Loaders . . . Off-Highway Trucks . . . Diesel and Carbureted Engines . . . Motor Trucks

WHAT'S NEWS in Products

CHAIN SAW CUTS IN ANY POSITION

A new lightweight, direct-drive chain saw has an all-angle diaphragm carburetor which is said to allow cutting in any position. The Model EZ saw weighs only 19 lb. Its light weight and perfect balance are said to make it ideal for limbing or undercutting as well as felling, bucking, notching and boring.

The EZ is powered by a 5-hp engine and is available with 12-in, 17-in., 21-in., and 30-in. guide bars. It is said the saw will bring down trees up to 3 ft in diameter and will cut through 8-in. oak in 5 sec and through 18-in. pine in 14 sec.

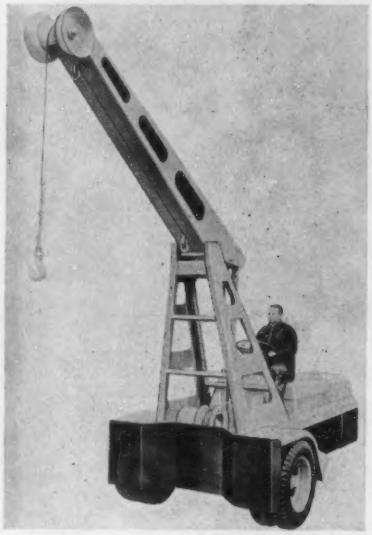
The saw has an integral cooling fan, aviation type cylinder with chrome-plated bore, waterproof and dust-proof ignition, aluminum piston, needle bearing on connecting rod, ball bearings on shaft and pinions, and die cast magnesium and aluminum alloy construction. *Homelite, Dept. RA, 75 Riverside ave., Port Chester, N. Y.* •

COLORED PLASTIC CONSTRUCTION PANELS

Translucent plastic now provides colorful paneling for both interior and exterior construction. This "Allite" translucent plastic paneling is available in a variety of colors, weights, sizes, finishes and degrees of light transmission. The material is reported to be shatterproof, weather and fire resistant, lightweight and durable. The panels are available either corrugated or flat. The material is applicable for sidelighting, skylighting, weather shelters and ticket-window separators. *Barrett Division, Allied Chemical & Dye Corp., Dept. RA, New York* •

NEW MOBILE CRANE

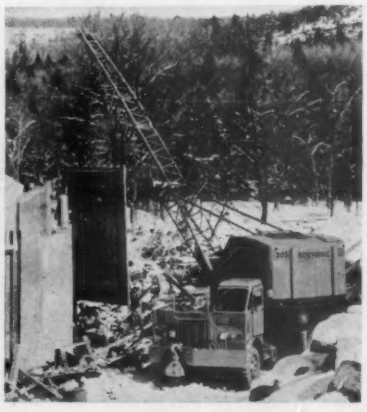
This gasoline-powered mobile crane, available with boom lengths of 9, 10 or 12 ft, is designed to work either within plants or in yard areas. The "Karry Krane" includes power steering as standard equipment, trunnion type steering wheels, short turning radius and rounded rear end design for easy maneuverability. Boom lengths are adjustable to six positions, and either single-part hoist line, for capacities to 6,000 lb, or two-part hoist line, for capacities to 10,000 lb, are offered. The unit has a load-lifting speed of 75 to 108 fpm and lowering speed of 165 to 240 fpm. *Hyster Company, Dept. RA, 2902 NE Clackamas st., Portland 8, Ore.* •



25-TON TRUCK CRANE

All of the improved operating and maintenance features of the Koehring Model 305 Crawler Excavator have been retained in a truck-mounted version of the unit. Known as the Model 305 Truck Crane, the machine is said to be able to lift loads up to 25 tons and to have a road speed of 30.2 mph.

The upper machinery arrangement has been simplified to contain only two horizontal shafts, and the turntable is equipped with integral sidestands on which the main cross shafts revolve. The turntable swings on six adjustable hook rollers that are said to resist tipping in any direction.



The crane is said to be adaptable to any type of operation, including lift, clamshell, dragline, grapple, magnet and pile-driving work. For special high-lift service, the standard 30-ft boom can be extended to a maximum of 100 ft.

In addition, a jib boom up to 30 ft can be added.

The all-welded boom structure has 2-hole butt joints for making fast connections, and safety boom limit stops and power boom lowering are standard on the crane.

The truck chassis is provided with five main and two auxiliary forward speeds and is equipped with air brakes built into each of the four double-tired rear drive wheels. For greater lift capacity over the side and rear, a 205-in. wheel base with 9-ft axles has been provided. Front and rear outriggers provide extra stability during stationary lifting operations. *Koehring Company, Dept. RA, Milwaukee 16, Wis.* •

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COMMUNICATIONS OFFICER

and Revenue Builder!

He's responsible, of course, for constructing and maintaining your communication facilities. But his real job is to *build railroad revenues.*

HE CAN DO IT, TOO—with modern high-speed communications.

He may propose an automatic telephone network, throughout the length and breadth of your system. It's a *proved* method of speeding train movements, increasing locomotive hours, and improving service to shippers and travelers. It cuts operating costs, and it builds business!

He may recommend mechanized car-reporting to keep track of freight cars. Or yard communication facilities—or a public-address system for a passenger station (each of these, too, has proved it can pay its way under proper conditions). He will choose from these and dozens of other services available, to meet your specific needs.

And the cost? Probably one of the smallest items in your budget. And remember, it shows up on *both* sides of the ledger! The fact is—adequate communication costs little, but does a BIG job.

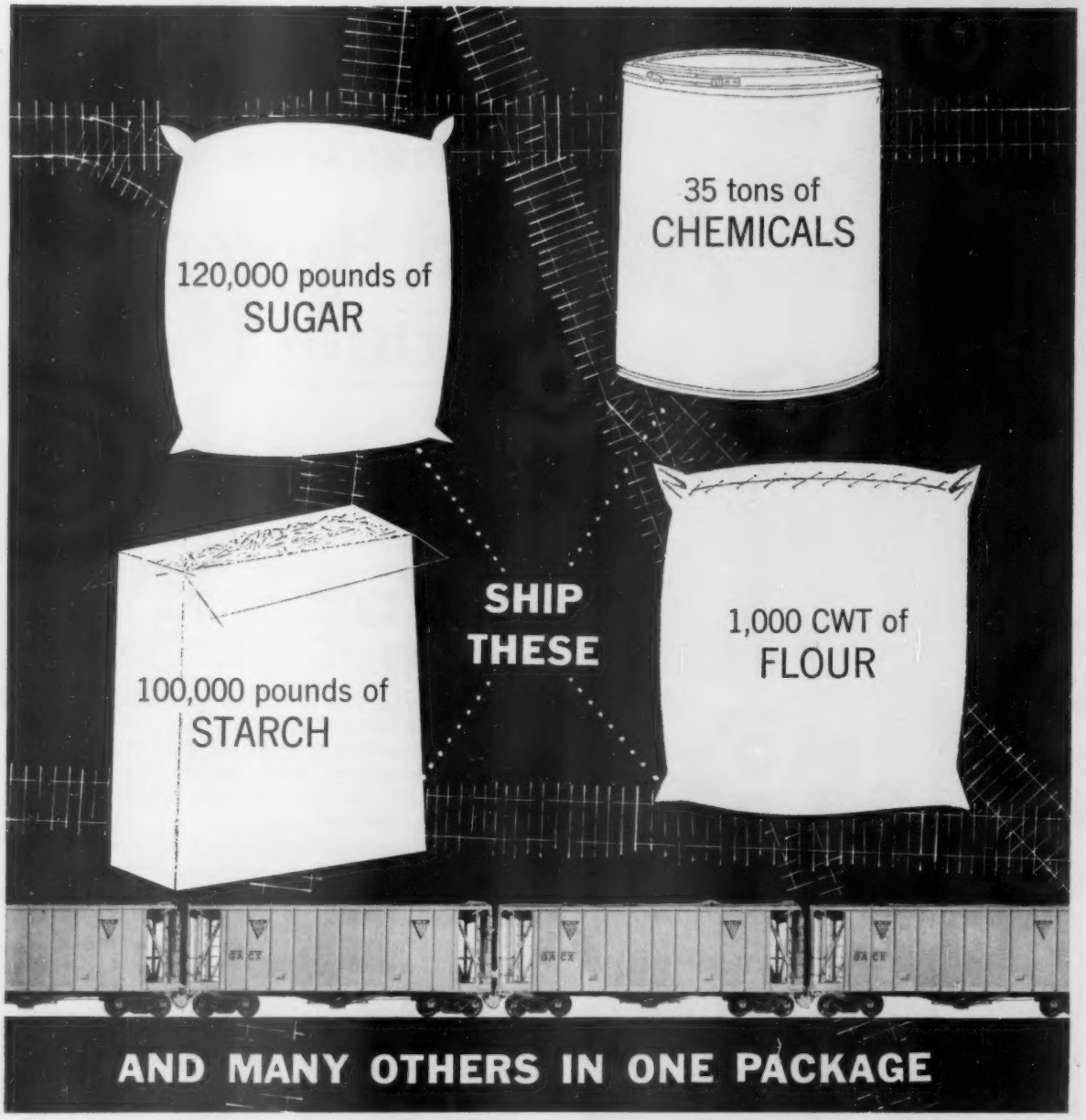
Having served America's railroads for 42 years, we can probably answer many of your questions regarding "revenue-building" communications. Simply contact your Automatic Electric representative, or call Automatic Electric Sales Corporation (HAymarket 1-4300), 1033 West Van Buren Street, Chicago 7, Illinois. In Canada: Automatic Electric Sales (Canada) Ltd., Toronto. *Offices in principal cities.*

Mr. L. R. Thomas, Electronics Engineer with Santa Fe reviews a communications problem with an assistant.

AUTOMATIC ELECTRIC

Originators of the dial telephone • Pioneers in automatic control

GENERAL TELEPHONE SYSTEM

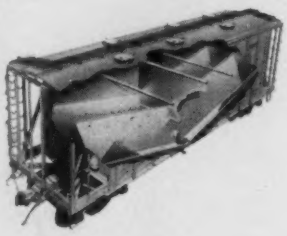


Save! Ship in Bulk via Airslide® Cars

The Airslide Car is designed and built for materials never before successfully shipped in conventional covered hopper cars. The Airslide Car has been proved by more than 3 years of continuous use in all climatic conditions all over the country.

Over 2000 Airslide Cars are now in use or on order. They require no re-spotting, provide far more clearance for unloading and can be unloaded into any conveying system as fast as the system permits. If such requirements are important to you, write today for full information about General American's new Airslide Car.

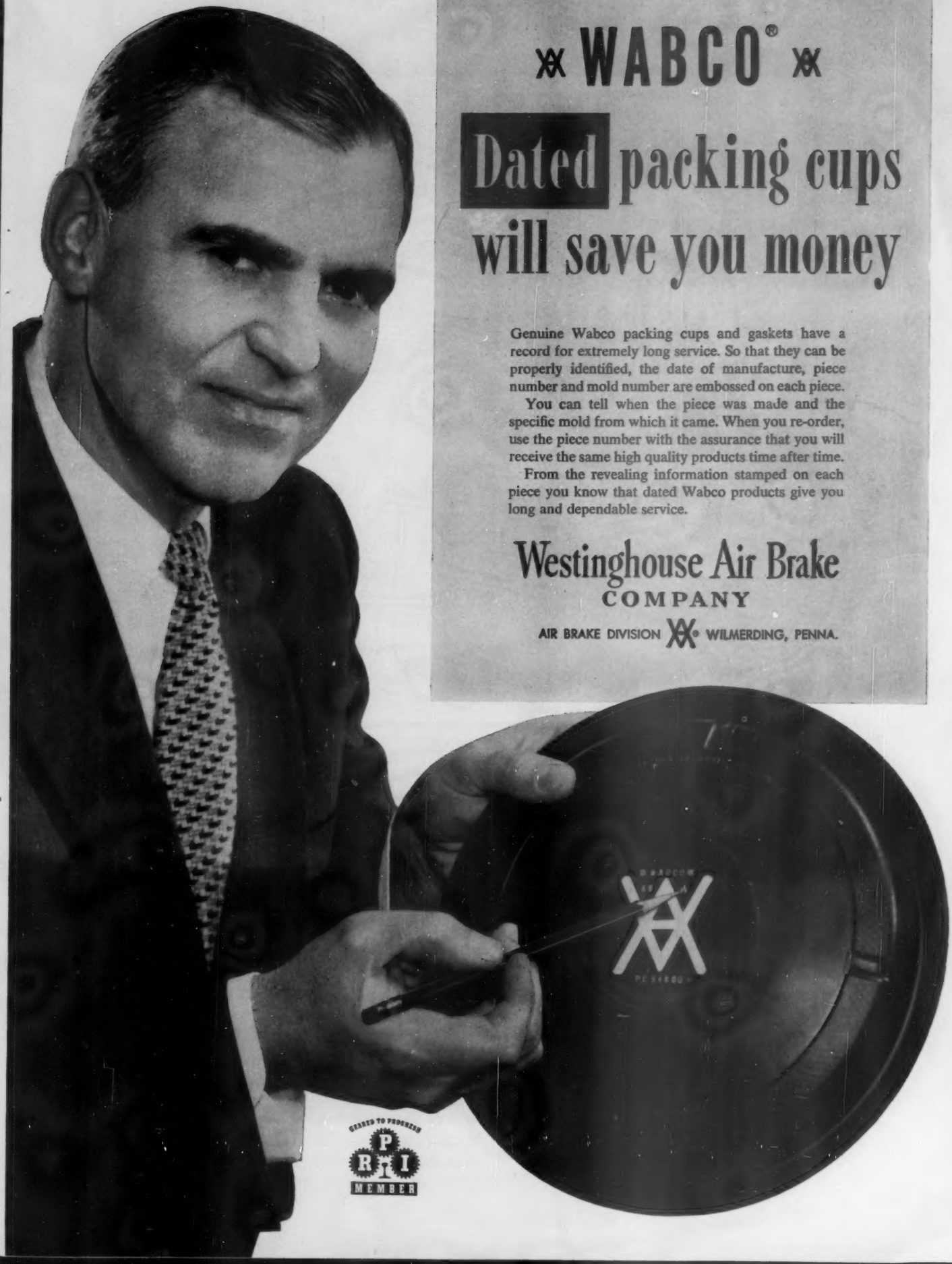
CLEAN INTERIOR DESIGN—*All-welded construction—no interior carlines or other protuberances. Provides maximum sanitation and minimum product retention. All loading hatches and discharge outlets provide a hermetic seal.*



AIRSLIDE GENERAL AMERICAN TRADE MARK

GENERAL AMERICAN TRANSPORTATION CORPORATION

135 South La Salle Street • Chicago 90, Illinois • Service Offices In Principal Cities • Service Plants Throughout The Country



WABCO®

Dated packing cups will save you money

Genuine Wabco packing cups and gaskets have a record for extremely long service. So that they can be properly identified, the date of manufacture, piece number and mold number are embossed on each piece.

You can tell when the piece was made and the specific mold from which it came. When you re-order, use the piece number with the assurance that you will receive the same high quality products time after time.

From the revealing information stamped on each piece you know that dated Wabco products give you long and dependable service.

Westinghouse Air Brake COMPANY

AIR BRAKE DIVISION WILMERDING, PENNA.

GEARED TO PROGRESS
P R I
MEMBER

who called the railroads a "monopoly"??

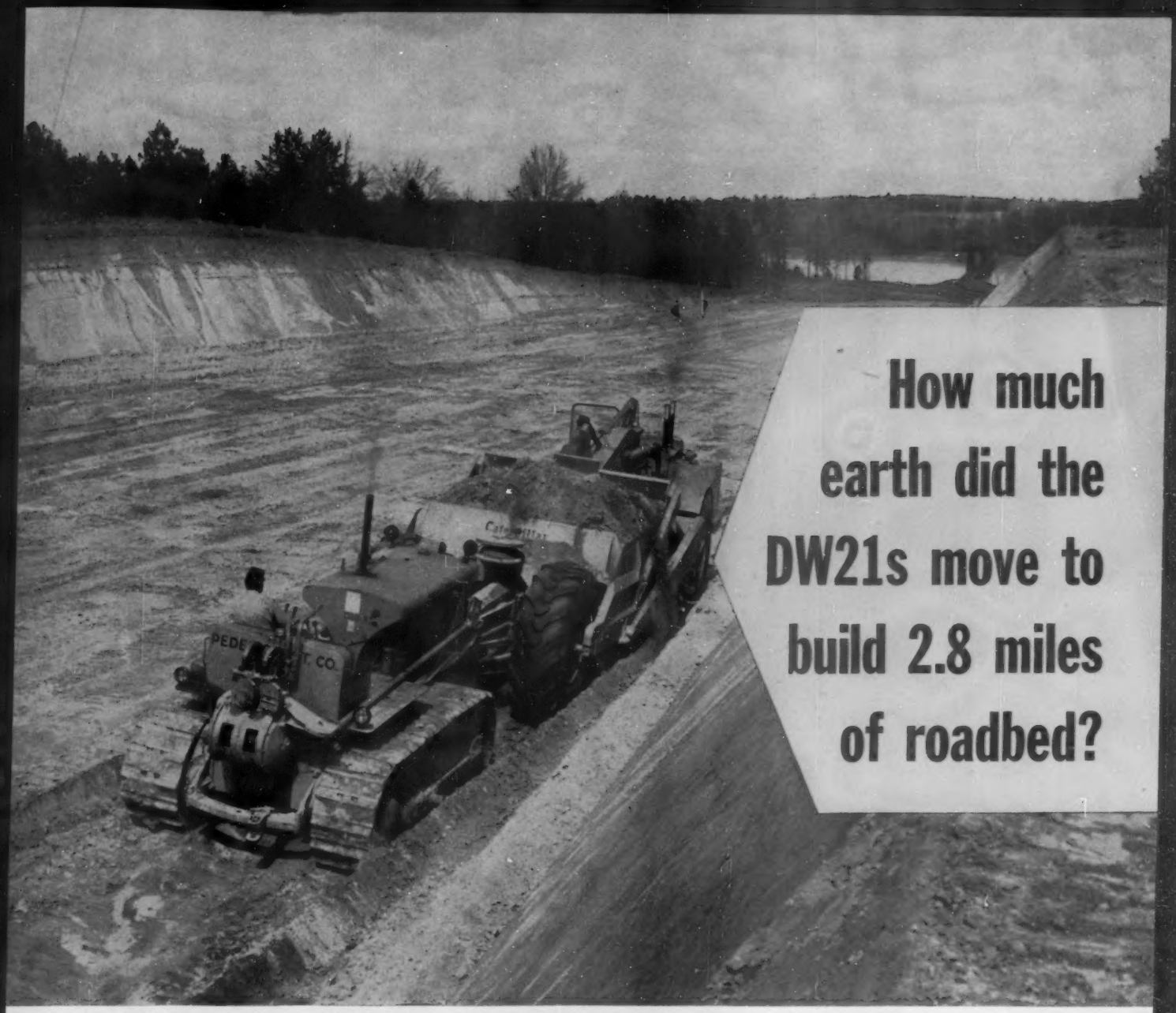
by Hungerford

We will be glad to send you enlarged copies of this Hungerford cartoon (without advertising copy) for posting on your office and shop bulletin boards, or a cut for your company magazine, at cost.

Edgewater Rolled Steel Wheels

for Freight Cars Passenger Cars Diesel Locomotives

Edgewater Steel Company
PITTSBURGH 30, PA.



How much earth did the DW21s move to build 2.8 miles of roadbed?

To build 2.8 miles of roadbed for the Charleston & Western Carolina Railway Co., H. L. Peden Construction Co. had to move 375,000 yards. To do this big job quickly and efficiently, the company used two CAT* DW21s. Working with these big Caterpillar rigs were two DW10s, a D8 for push-loading and a No. 12 Motor Grader.

The job, which reduced curvature and evened grades, required cuts as deep as 51 feet. The DW21s and their matched scrapers made a 3000-foot round trip every six minutes with an average load of 20 yards. Their speed averaged 12 MPH including loading!

And now the productivity of these big yellow units has been increased! The new DW21 is teamed with the new LOWBOWL Scrapers to give you faster loading time and bigger loads. This giant scraper now has a capacity of 18 yards struck, 25 yards heaped!

These new scrapers feature an efficient new concept in design. The bowl has been widened and lengthened, yet the bowl depth has been lowered. In that way horsepower can be utilized more efficiently. Material is loaded with less resistance right to the end of the loading cycle. Increased high apron lift provides ejection of *any* material and increased ground clearance enables the scraper to work even under extremely "soft" conditions.

You will find that new models have been created and new refinements added in the entire Caterpillar off-track line. These machines have been designed to increase production and lower costs on your jobs.

So it's more important than ever to see your Caterpillar Dealer. Call him today. Ask for a demonstration—on *your* job.

Caterpillar Tractor Co., Peoria, Illinois, U.S.A.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

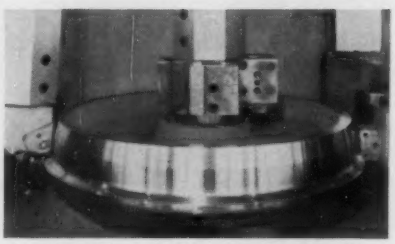
NAME THE DATE... YOUR DEALER WILL DEMONSTRATE

precision . . . and the Southern® cast steel wheel!

Because all finished surfaces on our new cast steel wheel are machined *at once*—many customers tell us they've never seen a freight car wheel so uniform from one wheel to the next and from one shipment to another. They tell us this shotblasted 1.5% carbon wheel is by far the easiest to inspect, and the easiest to bore and mount.

Yes, the machining assures a true, well balanced wheel—but uniformity of product, structurally and dimensionally, comes first. In the country's most modern wheel plant at Calera, Ala., latest foundry techniques provide an economical process; and the most advanced methods for quality control assure a quality product.

In service, the Southern steel wheel is easy on the track, easy on the lading, easy on the budget. Average life is measured in the hundreds of thousands of miles. Specify this new cast steel wheel for true over-all economy!



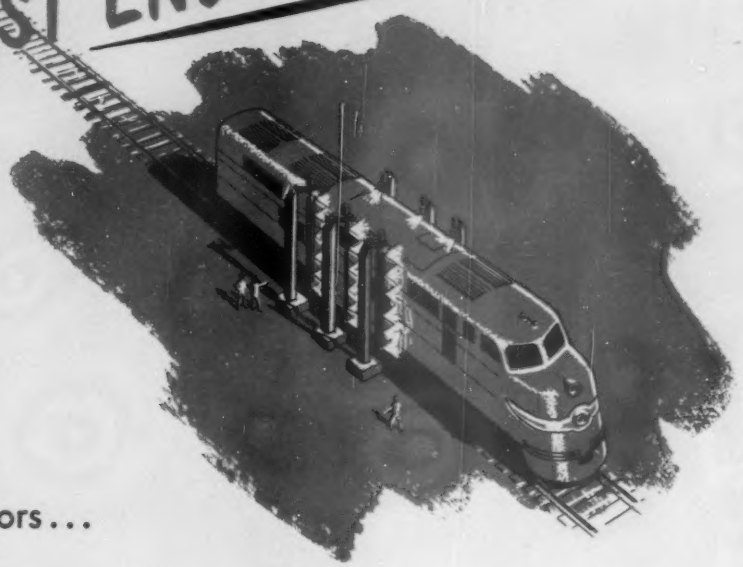
Tread and flange contour, rim face, hub face, and bore are machined *at a single chucking* on special vertical turret lathes which set new standards of precision for freight car wheel rotundity and concentricity.

SOUTHERN WHEEL DIVISION
A-1409

AMERICAN
Brake Shoe
COMPANY

230 PARK AVENUE, NEW YORK 17, N.Y.

Oakite gives you the IMPORTANT advantage... LOW-COST END RESULTS



FOR EXAMPLE:

one railroad
saves $863 a month
cleaning diesel exteriors...

With cleaning materials, it's not what you pay at the start, but how you *end up* that really counts.

Look how one Class 1 railroad proves this for themselves on diesel cleaning. The figures tell this story: the more effective Oakite detergent does a better job with less material . . . and saves the road $863 a month on this *one* cleaning operation alone.

Is initial cost per pound important? Not when you realize that Oakite Composition No. 72 is effective using only *one-third* the concentration . . . and that this solution banishes all greasy soil and road film with little more than *one-fourth* the number of gallons!

Here, then, is actual case-history proof that in railroad cleaning, Oakite gives you the *IMPORTANT* advantage . . . LOW-COST *END RESULTS.*

	Initial Cost per lb.	Solution used per Diesel	No. of lbs. required for 807 Diesel cleanings	Cost of Material per Diesel Unit cleaned	Total material cost per month
Cheaper Cleaner	.16	20 gals. at 6 oz./gal.	6052½	$1.20	$968.40
Oakite Cleaner	.17	5.6 gals. at 2 oz./gal.	617½	.13	104.91

Monthly savings to Railroad are $863.49

To find out how specialized Oakite Cleaning materials and stream-lined Oakite methods can save money for your railroad contact your local Oakite man or send for 56-page booklet "How to make sure of the best in railroad cleaning." No obligation. Oakite Products, Inc., 46 Rector Street, New York 6, N. Y.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE®
MATERIALS · METHODS · SERVICE
SCIENCE

Export Division Cable Address: Oakite

RAILROAD DIVISION

On the A.R.T.

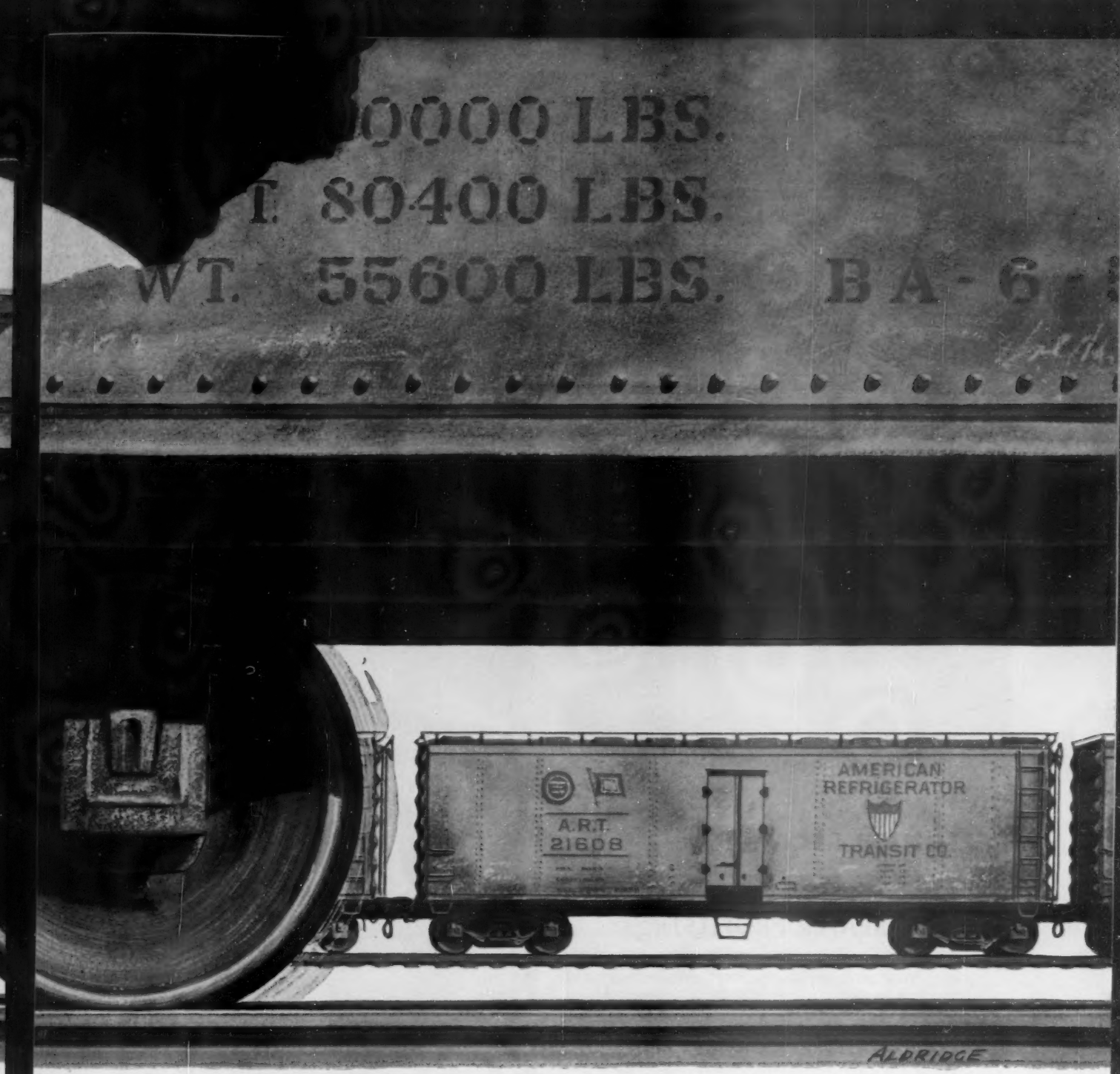
THEY WHET YOUR APPETITE

At any fruit or vegetable counter, the biggest sales-builder of all is the "just-picked" look. That's why the A. R. T. Company has done such a topflight job of providing cars that ride smoothly at higher speeds . . . to bring produce from the orchards and farms to your dinner table safely and quickly.

Is this good service possible only with new cars? Not at all. Older cars—with trucks dating back to the pre-Ride-Control era—are simply brought up to modern riding standards with ASF Ride-Control Packages. Change-over takes only a few minutes and the investment is small—practically nothing, in fact, compared with the way *improved service* retains and *regains* freight revenues.

Safe, prompt arrival of *any* commodity carried on the rails is just as important and desirable as a fresh-looking orange! Further tests on your road will prove how Packages can help you increase *profits* . . . through greater car utilization, better service, fewer damage claims.

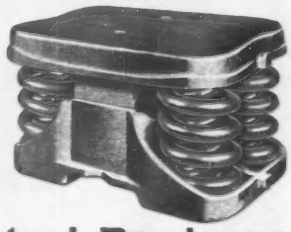
Now is the time to make smooth riding another objective of your general repairs program!



WITH SMOOTH-RIDING CARS!

NOW . . . all ASF Ride-Control Packages are fitted with Extended Life Springs

In appearance, these springs look like any standard truck spring . . . but tests prove they average at least 10 times longer life! Ride-Control Packages offer you a quick answer to smoother riding—and an answer to costly spring failures and replacement.



Bring your older cars up to modern riding standards ... with

ASF **Ride-Control Packages**

AMERICAN STEEL FOUNDRIES

Prudential Plaza, Chicago 1, Illinois

Canadian Sales: International Equipment Co., Ltd., Montreal 1, Quebec

VISIBLE PERSONNEL RECORDS "CLEAR THE TRACKS" ...FOR GREATER PROFITS!

Reduction in clerical costs and the advantage of having *all* personnel records consolidated in one place is the end result desired by railroad Personnel Administrators.

Such data as, qualifications, physical examinations, vacations, attendance, pension, retirement and others, can all be integrated into *one* Kardex Visible Control . . . with pertinent facts about each employee *visibly signaled*. This is easily accomplished by using the Remington Rand electrically powered Robot-Kardex, which eliminates physical fatigue of record keeping, speeds reference and posting, visibly controls records of over 4000 employees in one unit and saves valuable floor space.

For smaller offices, Kardex Imperial cabinets house the visible controls needed . . . with savings up to *75%* in clerical costs.

Kardex Visible Control *saves* administrative time and *simplifies* jurisdiction over all personnel. Get the profit-making facts about Robot-Kardex ...Kardex Imperial visible equipment . . . and better methods for Personnel Records Control. Write to Room 1848 for FREE brochure KD730 (Robot-Kardex) . . . and booklet X1464 Personnel Administration (records and procedure).

Remington Rand

DIVISION OF SPERRY RAND CORPORATION

315 FOURTH AVENUE, NEW YORK 10, N. Y.

Amcreco
Lowry Process
Creosoted
Products

Bridge Timbers
Adzed and Bored Cross Ties
Poles
Plank

Pressure treated for
Strength that lasts!

with AMCRECO Creosoted Products

Long service life with minimum maintenance—that's how Amcreco quality products reduce maintenance-of-way costs to the lowest possible level. Amcreco cross ties, bridge timbers, poles and plank last longer with greater strength because they are pressure treated in creosote by experienced Amcreco methods.

Start now and lower your maintenance-of-way costs by taking advantage of our nearly half a century of wood treating experience. Call your nearby Amcreco sales office for positive information on maintenance cost reduction.

AMERICAN CREOSOTING COMPANY

Colonial Creosoting Company
Federal Creosoting Company
Indiana Creosoting Company

AMCRECO
LOWRY PROCESS
CREOSOTED WOOD

Gulf States Creosoting Company
Georgia Creosoting Company
Kettle River Company

Georgia Forest Products Company

GENERAL OFFICES LOUISVILLE 2, KENTUCKY
12 FIELD SALES OFFICES TO SERVE YOU

"They made me a V.P. for specifying

GOULD

Research-built

BATTERY POWER"

A healthy reward awaits *anyone* who chooses Gould battery power. Not only is battery power the most economical power you can buy, but Gould power gives you extra performance and extended service life possible only through years of basic and applied battery research.

Another reason for specifying Gould is Gould's Field Engineering Service. Covering all industrial centers in the nation, it's the finest in the industry . . . helps keep your batteries working at top capacity . . . adds months to their normal life. Get more power per dollar with Gould research-built battery power!

America's Finest
GOULD
KATHANODE BATTERIES
for Diesel Starting

Always Use Gould-National Automobile and Truck Batteries

GOULD BATTERIES

GOULD-NATIONAL BATTERIES, INC.
Trenton 7, N. J.

"BETTER BATTERIES THROUGH RESEARCH"

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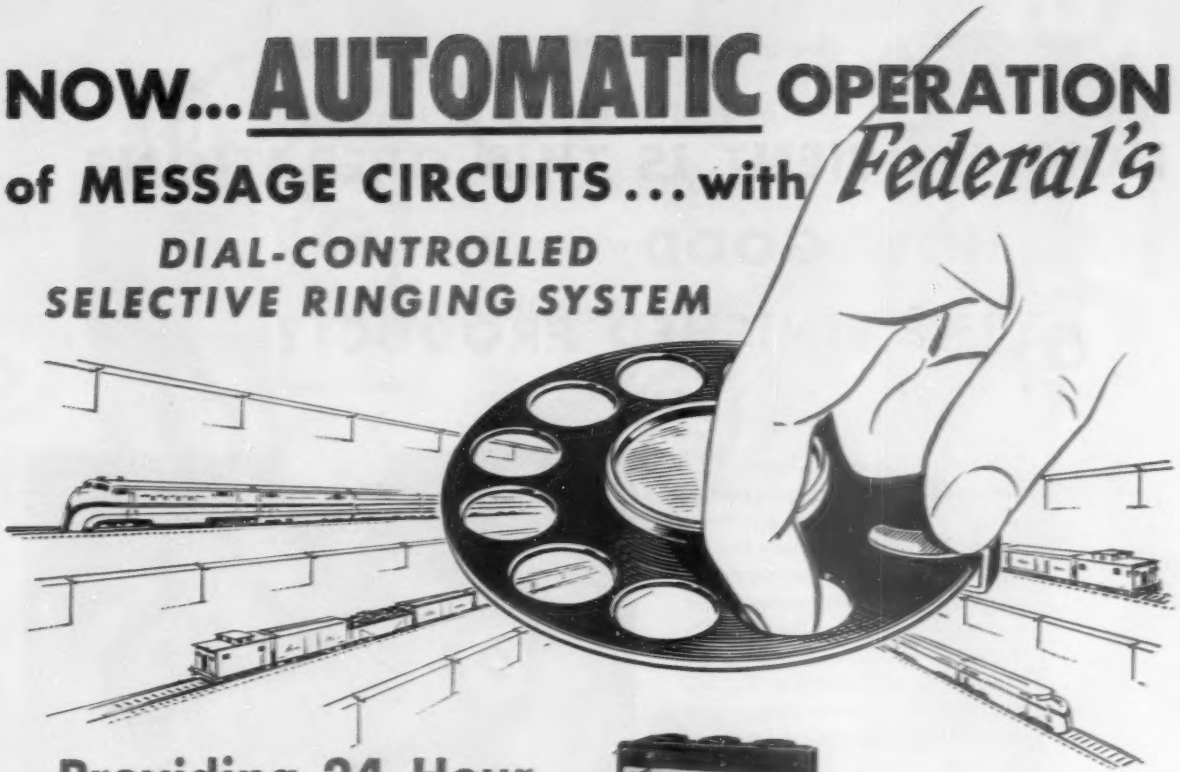
NOW... AUTOMATIC OPERATION of MESSAGE CIRCUITS... with Federal's DIAL-CONTROLLED SELECTIVE RINGING SYSTEM



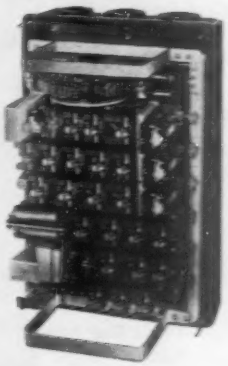
Providing 24-Hour Inter-station Dialing... with automatic or manual switchboard

Federal's Dial-Controlled Selective Ringing System brings another important "first" to American railroads ... *fully automatic operation* of message circuits... for greater speed and efficiency—*plus* economy!

Here is the system that permits retention of your present manual service... or enables you to have completely unattended service. With either, you have the advantage of *around-the-clock dialing.*

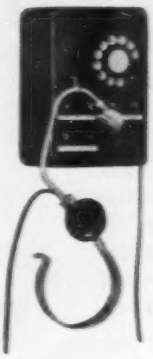
In applying Federal's Dial-Controlled Selective Ringing System to existing train dispatching facilities for station calling, the dial unit can be located at as many dispatcher positions as desired. The only equipment needed is a dial-controlled code generator, a distant dialing unit (which permits dispatching by remote operation), and a waystation dialing unit.

Get the facts about this newest development of Federal-IT&T world-wide experience... this *exclusive* feature of Federal's modern Train Dispatching System, now available to railroads for automatic, faster, more efficient and dependable train operation.

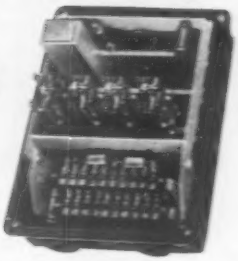


Federal's Unique DIAL-CONTROLLED CODE GENERATOR "Heart of the System"

No other equipment like it on the market... handles dispatching and message circuit functions automatically. The unit transforms dial pulses into 3½-cycle codes to select desired stations.



Way-station Dialing Unit



Distant Dialing Unit

For complete information on Federal's Dial-Controlled Selective Ringing System, write to Railroad Division: Dept. P-947

Federal

A DIVISION OF IT&T

Federal Telephone and Radio Company

A Division of INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION

RAILROAD DIVISION • 100 KINGSLAND ROAD • CLIFTON, NEW JERSEY

In Canada: Standard Telephones and Cables Mfg. Co. (Canada) Ltd, Montreal, P.Q.

Train Radio • Sequence Switch Interlocking • Carrier Telephone and Telegraph • Microwave, Dial Telephone, Train Describing, Train Dispatching and Remote Control Systems • Automatic Classification Yards • Closed Circuit TV • Selenium Rectifiers • Battery Chargers • Wire and Cable

HOW EFFICIENT IS THIS OPERATION?
HOW GOOD
IS THE FINISHED PRODUCT?

Whether you are concerned with manufacturing or with purchasing rolling stock, these are questions of vital concern to you—for ultimately they govern the durability and cost of the end product. Here is just one example how HELIARC welding is helping railroads gain new product quality at substantial savings . . . the unit being fabricated is a galvanized iron and mild steel refrigerator car.

Welding Speeds Average 30 In. Per Minute

Semi-automatic welding requires no special skill, and speeds two to three times faster than manual welding can be easily maintained. The HELIARC welded side and floor panels shown are fabricated of 14 and 20 gage galvanized iron and mild steel.

309 Ft. Of Top-Quality Welds Per Car . . . Minus Flux

In HELIARC welding, argon gas automatically shields the weld puddle from contaminating effects of the atmosphere. All 31 butt, lap, and flange joints in each car are of the highest quality.

Find out about the particular welding installation that can increase your production speed and unit quality. Call your local LINDE representative for detailed information on LINDE's modern methods for joining metals.

Semi-automatic HELIARC welding torch speeds and simplifies fabrication of refrigerator cars.

RAILROAD DEPARTMENT

Linde Air Products Company

A Division of Union Carbide and Carbon Corporation

30 East 42nd Street UCC New York 17, N. Y.

Offices in Other Principal Cities

In Canada: LINDE AIR PRODUCTS COMPANY
Division of Union Carbide Canada Limited, Toronto

"Linde" and "Heliarc" are registered trade-marks of Union Carbide and Carbon Corporation.

Supplying to railroads the complete line of welding and cutting materials and modern methods furnished for over forty years under the familiar symbol - - -

BROWNHOIST Diesel powered railroad cranes help insure low cost operation and improved service on America's railroads

In any extensive Dieselization program, cost-minded railroad men include BROWNHOIST Diesel-powered railroad wrecking cranes. Designed especially for railroad service, these powerful, efficient BROWNHOIST units help keep costs down. Their engineering simplifies operation and maintenance, their rugged construction insures long life. Capacities from 80 to 250 tons. Consult a BROWNHOIST representative or write us today for complete information.

BROWNHOIST MATERIALS HANDLING EQUIPMENT GIVES A LIFT TO AMERICAN INDUSTRY

INDUSTRIAL BROWNHOIST CORPORATION
BAY CITY, MICHIGAN DISTRICT OFFICES: New York, Philadelphia, Pittsburgh, Cleveland, Chicago, Denver, San Francisco, Montreal • AGENCIES: Detroit, Birmingham, Houston

180

Penn-Texas

BROWNHOIST

New in 1945...

NEW AGAIN in 1956...with

Diesel Conversion by L. B. Smith, Inc.

This giant 250 ton Western Maryland self-propelled Bucyrus-Erie wrecking crane was recently converted in our shops from steam to Diesel power. Remodelling included the installation of a General Motors Diesel with Allison torque converter, Westinghouse air controls with compressor and Twin Disc air reversing clutches. The cab was moved from back to front for maximum visibility by the operator. Identical controls with which the operator was familiar were arranged in their same previous location.

This big Dieselization job is one of some 50 cranes modernized by our personnel, specialists in this type of Diesel conversion.

If you are considering a modernization program, it will pay you to investigate our know-how and facilities.

For complete information, phone or write:

L. B. SMITH, INC.

CAMP HILL, PENNSYLVANIA

Telephone (Harrisburg) RE 7-3431

"PLYPAK SAVES US PLENTY!"

(36-month repack saves money, too)

Application of Plypak to railway journals saves on repairs and delays. (5-year Plypak service record shows more than 80% reduction in hot boxes) Plypak also saves on waste (40%). Added to these savings is the fact that, on request to the A.A.R., Plypak may go 36 months without repacking . . . a big saving in labor, oil, and waste.

UNLIMITED A.A.R. APPROVAL

The PLYPAK has A.A.R. approval for unlimited application in interchange for those roads desiring its use—protected in interchange. See rule 101

PLYPAK

WASTE CONTAINER AND RETAINER

WAUGH EQUIPMENT COMPANY

New York, Chicago, St. Louis. Canadian Waugh Equipment Company, Ltd., Montreal

NOW...

425,000

CAR SETS!

Excuse us . . . please . . . our figures are showing again!

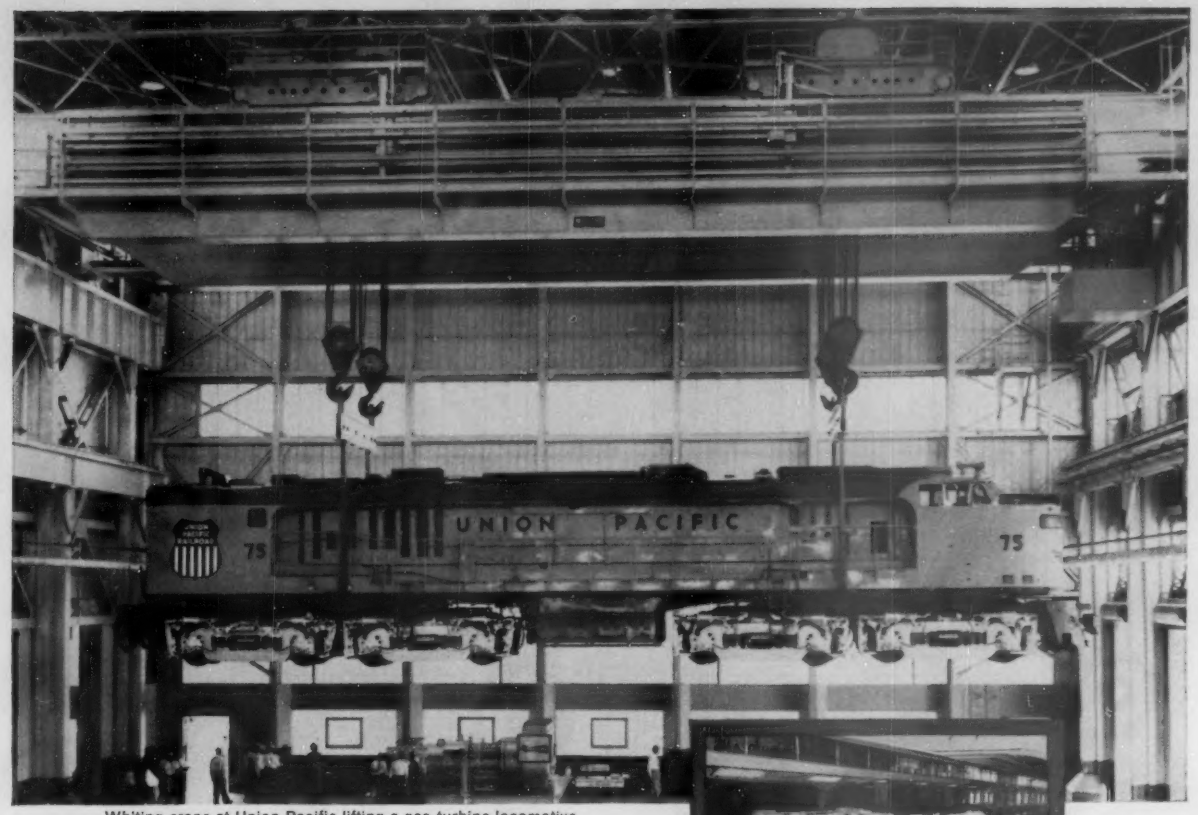
By May 15, 1956, our sales had passed the 422,000 mark. Actually, we now have sold more than 425,000 car sets of Barber Stabilized Trucks to more than 160 major railroads and private car lines in the United States and Canada.

We mention these new facts for *two* reasons: (1) There is no *better* way to convey to you the endorsement which the railroad industry has given our products; the leadership they have conferred on our company. (2) We're just plain *proud!* Standard Car Truck Co., 332 South Michigan Avenue, Chicago 4, Ill. *In Canada:* Consolidated Equipment Co., Ltd., Montreal 2.

Specify Smoother-Riding

BARBER

STABILIZED TRUCKS



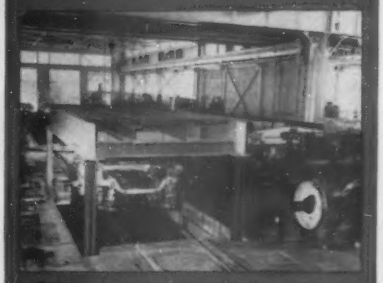
Whiting crane at Union Pacific lifting a gas-turbine locomotive

at Union Pacific

WHITING PUTS RUSH JOBS ON THE RIGHT TRACK...

Union Pacific's new repair shop at Salt Lake City, Utah, quickly handles all types of maintenance and repairs from light service to complete heavy-duty overhaul. Over 4,000 units are inspected and serviced a month—and Whiting equipment helps put them back on the line with the barest minimum of down-time. Their Whiting 250-ton capacity overhead electric traveling bridge crane safely lifts the largest Union Pacific Diesels and even the heavier gas-turbine locomotives. As a result the job is done quickly and these big engines are back on the road in record time. A Whiting Drop Table with a capacity of 100 tons enables them to change trucks in a matter of a few hours. Both the crane and the drop table provide fast, efficient, low cost repair and service. Whiting equipment at Union Pacific is "paying-off." It will pay you to look into these latest Whiting methods—write today for complete information.

A truck ready for removing on the Whiting Drop Table



Release lock has automatically closed as spacer posts are lifted by Whiting Drop Table. After it has been raised, truck is easily rolled off

WHITING CORPORATION
15603 Lathrop Avenue, Harvey, Illinois

Manufacturers of Wheel Grinders • Cranes • Train Washers
Portable Electric Jacks • Drop Tables

WHITING

Courtesy
ACF Industries

YOLOY "E" STEEL

Used in New York Subway Cars

Yoloy "E" is one of Youngstown's High Strength Low Alloy family of steels designed to cut dead weight without sacrificing strength. Thinner sections can be used with safety. Resistance to shock, vibration and corrosion is improved, thus maintenance costs are reduced.

Freight or passenger cars made from Yoloy "E" steel will provide longer life and lower operating costs due to its high resistance to corrosion.

Youngstown's Service Engineering personnel are available, at your request, to discuss the merits of the Yoloy family of steels in solving your specific requirements.

Youngstown

QUALITY YOUNGSTOWN SERVICE

THE YOUNGSTOWN SHEET AND TUBE COMPANY *Manufacturers of Carbon, Alloy and Yoloy Steel*

General Offices: Youngstown, Ohio - District Sales Offices in Principal Cities

SHEETS - STRIP - PLATES - STANDARD PIPE - LINE PIPE - OIL COUNTRY TUBULAR GOODS - CONDUIT AND EMT - MECHANICAL TUBING - COLD FINISHED BARS - HOT ROLLED BARS - BAR SHAPES - WIRE - HOT ROLLED RODS - COKE TIN PLATE - ELECTROLYTIC TIN PLATE - RAILROAD TRACK SPIKES

PUT YOURSELF IN THIS PICTURE AND ASK—

You are invited to visit National's exhibition room where the above photo was taken.

"...but don't Type F couplers cost more than ordinary couplers?"

"The initial *price* is higher, but the ultimate *cost* is no greater. In fact, it's probably less . . ."

"How do you figure that?"

"First of all, the elimination of practically all vertical movement between mated F coupler heads, and the lesser amount of free slack, materially reduce wear on knuckles and coupler heads. Coupler contours remain within gage longer and this further reduces maintenance costs."

"Granted—when you couple two Type F's. What about coupling F's with other types?"

"Nominal free slack between an F and an E is about 30 percent less than with two E's. In addition, National Type F couplers have other features that are difficult to assess in terms of dollars, and that are even more important."

"You mean safety?"

"Certainly. Because of its superior safety features, the Type F coupler will reduce costly freight-train partings while increasing operating efficiency. Don't forget, the F is about 22 percent stronger than the E coupler."

"You mentioned elimination of vertical movement before. How is that achieved?"

"Notice these aligning wings, similar to those on the Type H Tightlock. This interlocking feature prevents vertical slipovers . . . helps to keep cars in alignment and helps to prevent them from climbing, overturning or jackknifing."

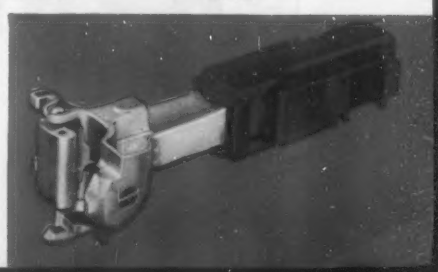
"I see what you mean by 'difficult to assess in terms of dollars,' but, in my book, safety adds up to dollars saved. Let's talk about deliveries on National Type F couplers . . ."

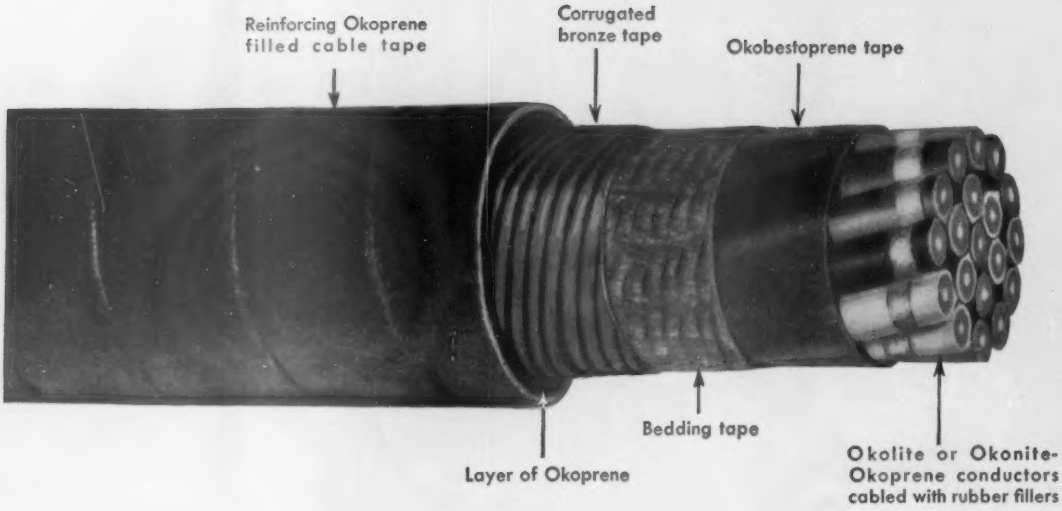
AA-2564

NATIONAL MALLEABLE and STEEL CASTINGS COMPANY

Cleveland 6, Ohio

COUPLERS • YOKES • DRAFT GEARS • FREIGHT TRUCKS • SNUBBER PACKAGES • JOURNAL BOXES and LIDS





How CM-OT strengthens and protects Okonite Railroad cables

Applications—signal and CTC control circuits • track wire • communication circuits • power circuits . . . designed primarily for direct burial use, it can also be installed in conduit, in racks, aerially, or in underground ducts.

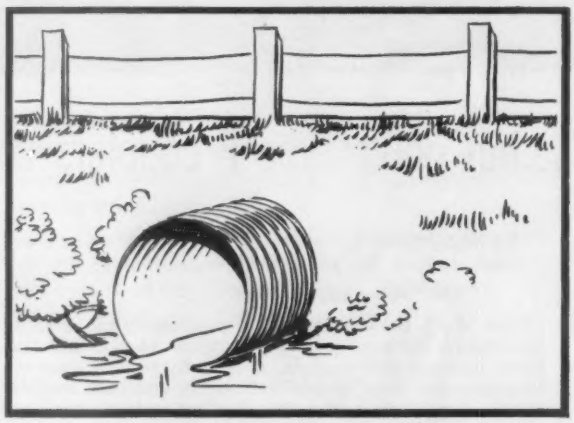
CM-OT (corrugated metal with Okoprene and reinforcing tape overall) is a protective covering designed for use on any standard Okonite-Okoprene signal cable or other Okonite railroad cable.

This lightweight covering combines the advantages of both a metallic and non-metallic sheath. The corrugated bronze tape provides high compressive strength and a permanent barrier against rodents, insects and termites. The Okoprene sheath is bonded to the corrugations of the bronze tape by vulcanization and prevents chemical or electrolytic corrosion of the tape.

Flexible, yet mechanically tough, this construction also provides excellent moisture resistance.

Electrically, the metal tape provides an easy method for locating any damage which might occur, and also acts as a shield which eliminates interference by adjacent power circuits.

Easily terminated, CM-OT cable can be trained in congested junction boxes and relay cases. Write for Bulletin RA-1086-S to The Okonite Company, Passaic, N. J.



As in underground pipes, the corrugated construction adds excellent compressive strength to insulated cable.

OKONITE OKONITE SINCE 1878 ***insulated cables***

4103

How to Unhorse The Transport Socialists

There's been a lot of disagreement with the suggestion made in this space two weeks ago—to the effect that the utility companies have been much more successful in getting people to realize that government-produced electric power is socialistic, than railroad people have been in securing public recognition of the even greater degree of socialism in transportation.

Our critics say—and they are right—that it's pretty hard to explain to people that a highway system, paid for in considerable measure by taxes levied on highway users, is socialistic, especially since provision of highways has long been an accepted government function.

Complete freedom from socialism in highway transportation would, of course, require that, at least, the long-haul highways be financed—not by taxes at all, but by compensatory tolls (varying with the size and weight of the vehicles). And, also to avoid socialism, tolls for commercial use of long-haul highways would have to be high enough to yield *ad valorem* taxes on highway property—the same as rates charged by the railroads have to be high enough to cover property taxes on tracks and roadway.

But this story gets pretty complicated in the telling. The socialism of it would doubtless be easier to uncover if government were providing—not just the roads, but also the vehicles using these roads. As one of our friendly dissenters points out—in the case of the Federal Barge Line, where the government *did* operate the "vehicles," the socialism involved was plain to see; and public opinion forced the sale of the barge line to private interests.

An Easier Story to Tell

It is beyond all argument, then, that the socialism of such power projects as TVA is easier to perceive than the socialism of toll-free superhighways (financed not just by the tax payments of users of such superhighways, but also by the taxes on motor vehicles which seldom if ever go beyond the local roads).

But it is precisely because socialism in transportation, in all its many phases (rivers, roads, airports), is usually so well disguised by the fact that the "vehicles" using this property are privately owned, that extra effort and extra skill are needed to unmask it. It was not, and is not, this paper's contention that the utility companies have brought more energy and ability to the disclosure of socialism in their business than the railroads have—but only that they appear to have been more successful.

As far as the railroads are concerned, the problem is complex but not insoluble. The railroads have many assets. It would, for instance, be hard to find another industry in the United States which can lay claim to as many first-rate public relations practitioners as the railroads can. The industry has a host of influential friends, even among political leaders not usually noted for their understanding of business policy. In many specific areas of public controversy the railroads have won outstanding victories. On most controversial issues the position of the railroad industry is identical with that advocated in the public interest by most economic scholars. The leaders of railway labor are, on the whole, cooperative.

And yet, despite all these points in the railroads' favor, each year sees other forms of transportation with added hundreds of millions of the taxpayers' money at their disposal. And session after session of Congress closes up shop without loosening in the slightest degree the regulatory shackles which prevent the unsocialized part of transportation from competing freely with the booming semi-socialized parts.

What's Wrong Anyhow?

One possible answer is that 50 or more able musicians do not automatically constitute an orchestra. There first has to be a lot of coordination of their effort. For one thing, they all have to be playing the same piece, and the different instruments must harmonize. In the utility business—or so it seems to a casual outside observer—they appear to have achieved a considerable degree of effective harmony by using the same tuning fork every time they give out with their music. And this tuning fork always sounds the key-note of anti-socialism.

It takes a lot of deep resolution for men—each of them harassed by a multitude of problems of their individual companies—to take the necessary time to think through and act wisely upon industry-wide policy problems. On individual company problems, decisive action comes much more easily and quickly—but with industry problems, action can come only after lengthy discussion, and much compromise.

Hard as it is, the railroad industry has on quite a number of occasions—especially but not exclusively in time of war—succeeded in attaining this degree of effective harmony of objectives and in its public explanation of them. Such industry harmony has always won a strongly favorable public response—and would do so just as surely in 1956 as it did, for example, in 1941.

This paper does not low-rate the railroads' public relations performance. In relation to the complexity of the problem, any objective test would evaluate railroad accomplishments very highly indeed. But that doesn't keep us from hoping and believing that, with the talent at their disposal, a still better job can be done.

A NETWORK of committees, from the top-level General Safety Committee to local groups as shown here, help pound home the safety story on a continuing basis. This helps make safety an important part of every man's job.

B&OCT'S 8-POINT PROGRAM IS . . .

Key to "Safety-Mindedness"

Concentrated accident prevention program drums home the safety message —Casualty rate improvement shows its effectiveness

"There is no formula. It's a case of education; and you have to stay after it every day to keep your people interested.

"We had 13 reportable injuries in 1954. In 1955 we were up a bit, to 19.

"This year looks like it will be pretty good, too, but in this business it's dangerous to try outguessing the future. You just have to keep trying."

That thumbnail sketch, from Superintendent C. K. Strader, is the safety story on the Baltimore & Ohio Chicago Terminal. The company has rung up an imposing record in recent years with a safety program that embraces a full octave:

- Care in employee selection.
- Break-in training for new men.
- Active committee work at all levels.
- Vigorous enforcement of safety rules.
- Attention to safety by supervisors in everyday contacts.
- Semi-annual instruction with safety car at all points.
- Good "housekeeping" to create a safe property.
- Prompt follow-up to any personal injury, whether "reportable" or not.

These eight points are the framework around which the B&OCT has built its record-toppling safety performance. In six years, 1949 through 1954, the Terminal won three of the coveted Harriman Safety Awards, including two in a row in 1953-54. In addition, the company won the National Safety Council's top "Award of Honor" in 1953. Last year B&OCT's casualty rate followed an industry-wide trend in edging upward. But the 1955 figure was still a very creditable 3.55.

Employment on the B&OCT fluctuates in the neighborhood of 3,200 and the company has all the complexities that usually attend a metropolitan terminal operation—connections with a network of other railroads, a large number of industrial sidings and a multitude of reciprocal trackage rights. All are among the necessities of life, but this concentrated operation does add to the problem of accident prevention. One principal redeeming feature, however, is the geographical compactness of the property, making it relatively simple to reach all employees.

Constant Teaching

This reaching out to employees, Mr. Strader believes, is one of the first requirements in any safety program. He recognizes the truism that a good safety record in one year is not something that is repeated automatically the next. It is necessary to give constant attention to safety matters, month by month, and the recognition of this need must stem from the top. This is the direction it takes on the B&OCT.

Safety teaching on the railroad begins the day an employee starts work. New train-service employees are handed over, individually, to a supervisor with whom they spend at least one full day, going over the fun-

DECADE OF SAFETY

	Man-Hours	Reportable Injuries	Casualty Rate
1955	5,357,000	19	3.55
1954	5,144,000	13	2.53
1953	5,879,000	17	2.89
1952	5,830,000	39	6.69
1951	6,221,000	30	4.82
1950	5,992,000	33	5.51
1949	6,052,000	35	5.78
1948	6,686,000	57	8.53
1947	6,569,000	75	11.42
1946	6,147,000	72	11.71

damentals of coupling and uncoupling cars, connecting and disconnecting air hoses, setting brakes, getting on and off cars and the like.

First stress, if not in fact the entire purpose of this training, is safety. B&OCT officers believe that first impressions about the need for safety consciousness carry over into the job, and are far more effective than if held back until the man has settled into regular work habits.

This beginner training doesn't stop here, of course, but carries over into student trips with experienced crews, then into a "preliminary" rules examination. Mr. Strader considers this early test a good measuring stick of the new man's ability to think, and to learn. And as a good many safety messages point out, the man who "thinks first" is far less apt to get hurt.

The B&OCT's safety effort, as on most divisions and railroads, embraces an intricate pattern of committees. These cover all parts of the terminal, from yards and shops up to the General Safety Committee at the top. Mr. Strader serves as permanent chairman of this general committee, and membership of the group consists of line officers from the operating, engineering and mechanical departments.

When the Terminal really plunged into its current safety program back 10 years ago the start was made with the general committee. Officers and supervisors in turn were impressed and reimpressed with the need to improve the company's then-ragged safety performance. Continued hammering first began to show results in 1948 when reportable injuries took their first sizable drop.

Meanwhile, the program was gaining momentum at the ground level through local safety committees. Principal work of these local groups on the B&OCT is to observe the work habits of employees and prevent unsafe practices from making headway. They also perform a vital communications function, without which any safety program soon breaks down. The committees disseminate safety information into the organization, and serve as a funnel through which employees can report unsafe situations which they feel need correcting.

It is B&OCT policy, in the latter cases, to take corrective action promptly. This is handled at the local level whenever possible, as it often is, but in some cases may progress up to the general committee. The big thing, however, is to correct the situation or else tell employees clearly why changes can't be made. This way accident prevention becomes the business of everybody on the Terminal. Management's sincerity on safety matters is a matter of public record.

BULLETIN BOARDS and posters are silent "Safety First" reminders in B&OCT shops and terminals. The Terminal uses every communications tool it can to keep employees "safety minded."

Personal Injury Follow-up

Another clue to the B&OCT's good safety performance is the prompt reporting, and follow-up, of any injury. This helps keep reportable injuries at low ebb because it assures any employee immediate medical attention. A personal injury is quickly reported, either by the injured man or his supervisor, to the chief dispatcher. From here the message is dispersed to all officers, including Mr. Strader, and the employee is whisked in for examination by one of the Terminal's medical examiners. If these are not immediately available the man is sent to the nearest hospital at railroad expense. In any case, the job is to determine the extent of the injury, provide whatever care may be required and start the man toward rehabilitation without loss of time. As Mr. Strader points out, when you're working against 72 hours you have to move in a hurry.

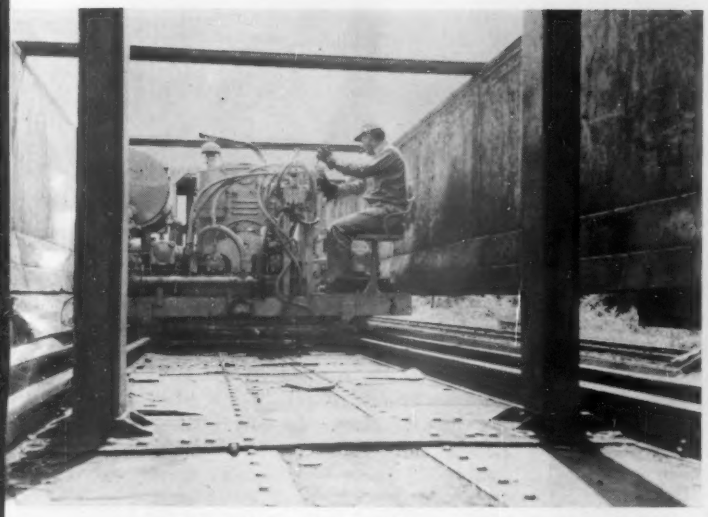
When all is said and done, however, safety on the B&OCT, as on any railroad, is pretty much a state of mind. The creation of "safety-mindedness" starts at the top—in fact, on the B&OCT, in the office of President H. E. Simpson himself. Mr. Simpson keeps close tab on safety performance, and the personnel and facilities of the safety department of the Baltimore & Ohio, B&OCT's parent company, are always available for use by the terminal organization.

But it is on the ground that records are made. Covering that gap from top to bottom is a responsibility of every officer and supervisor. As an operating man once pointed out, the ultimate goal is achieved the day the engineer on a switch engine gives his fireman the devil for walking across the tracks without looking first in both directions.

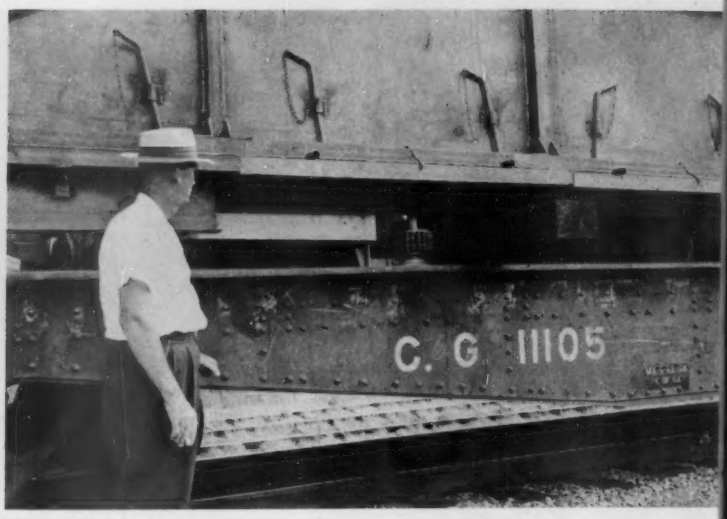
THE SUPERINTENDENT'S ROLE IN SAFETY

"The division superintendent must take the lead, for without his sanction and full support the safety program cannot succeed. On the contrary, with his enthusiastic leadership, it cannot fail. His activities, however, should have the approval of management and he should be encouraged by management to proceed as he sees fit to carry out a safety program which will produce desired results.

"It remains, therefore, a responsibility which rests primarily with the superintendent and should be accepted by him as a function of his position just as much as the establishment of a good record in gross ton-miles per train-hour, efficient yard operation, shop costs and maintenance of way expenses."—*From "Setting Up a Division Safety Program," a report by the American Association of Railroad Superintendents.*



WORKING IN CAR, machine expels ties on either side.



EMERGING from the car, tie is held . . .

Machine Unloads Ties from Cars As

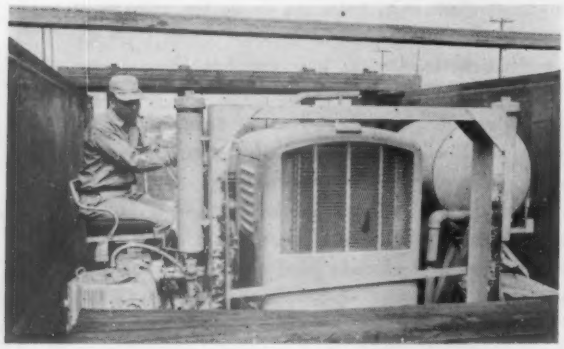
From now on, when a track supervisor on the Central of Georgia wants a crosstie unloaded from a car at a certain spot, all he has to do is press a button and out comes a tie from the car to drop close to where he wants it. This has all been made possible by a new tie-unloading machine and converted gondola-type cars which the road now has in use.

The tie unloader is the first production model of a machine which the Railway Maintenance Corporation, Pittsburgh, has placed on the market. It is designed to unload ties from special tie cars as it moves through them. It travels on four small flanged wheels on rails running the length of the cars and crosses from one car to another on short removable connecting rails.

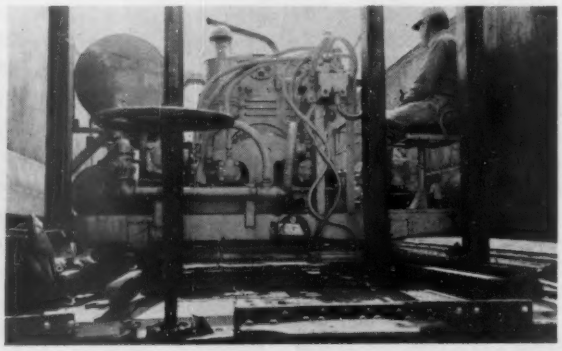
Expelling the Ties

The ties, which are loaded crosswise to the length of the cars, are expelled from either side of the car at about car-floor level. This is accomplished by crowding the machine against the sides of the loaded ties where a "finger," or projecting lug, attached to a revolving endless chain, engages the end of the tie at the bottom of the pile and expels it. As the bottom tie of each tier is ejected, the ties above drop down and the then lowest tie is in position to be unloaded.

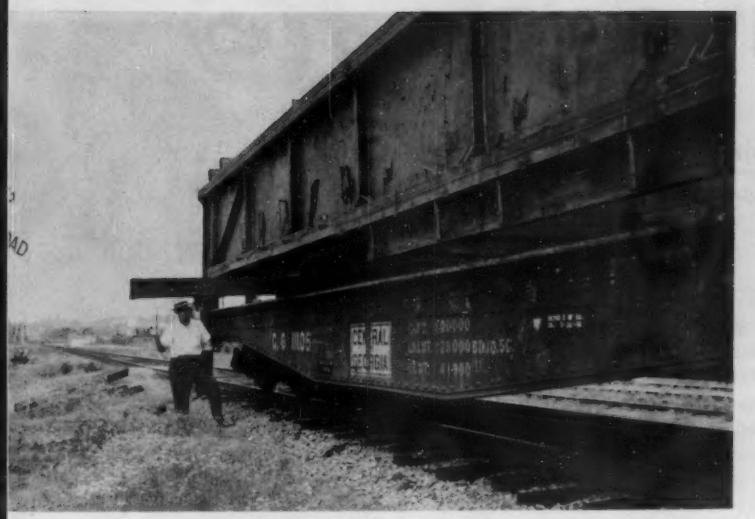
The special tie cars are adapted from 40-ft flat cars and are fitted with welded-steel sides approximately 6 ft high. A longitudinal opening, of sufficient height to permit the easy passage of a tie, extends the full length of each car at floor level on each side. These openings have hinged steel doors which, when in the down position, prevent the ties from working out while the car is in transit. Above



CROWDING against the sides of the tie piles, a lug, fixed to an endless chain at the front of the machine, engages the end of the bottom tie for ejecting it.



HYDRAULIC power is provided by two hydraulic pumps driven by a 50-hp air-cooled engine. The pumps drive a motor for propelling the machine and applying the brakes.



. . . HORIZONTAL by the machine and car until it . . .

FALLS in the clear. Engine speed determines throw.

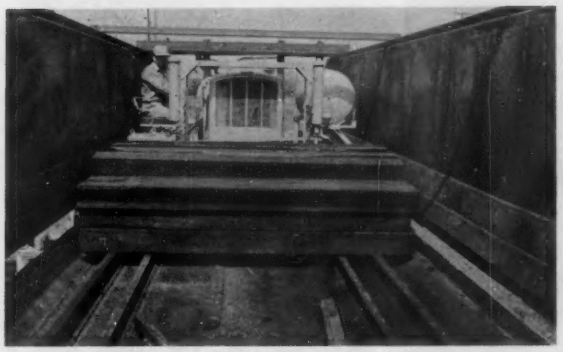
Fast As They Are Needed

Central of Georgia uses a commercial tie unloader which moves into a car of crossties and throws them off on either side of the track as they are desired

these openings are baffle plates which guide the ties down into position for engagement by the machine's "finger."

Running the length of each car are two sets of rails. One pair of rails is used by the tie-unloading machine as it moves through the car. The other pair, placed at a slightly higher elevation than those used by the machine, serve as a support for the ties. The ties are loaded with a sling and placed evenly at right angles to the sides of the cars.

The road plans to employ three men with the work train when unloading ties with the machine. One man, who is permanently assigned, will operate the machine, while a second man (usually the track supervisor) will walk alongside the car and signal the operator with an electric buzzer when to unload a tie. From this position, the supervisor will also be able to control the speed and movement of the train by hand signals. The third man (a section laborer) will be assigned to move any ties that fail to fall clear and will also remove the bulkheads at the ends of the cars when it is necessary to move the machine from one car to another.



TWO SETS of rails are laid lengthwise in each tie car. One set is used by the machine and the other, at a slightly higher level, supports the piles of crossties.

A SERIES of hinged doors extend along the car sides at floor level to block the opening and prevent the ties from working out while the car is in transit.

What the DL-701's Are Doing

Freight, passenger, and switching assignments were given to three Alco 1,800-hp demonstrators on cross-country tour

Versatile performance has been demonstrated by the new Alco DL-701 1,800-hp road switcher since the first three units left the Alco Products, Inc., shops at Schenectady in February.

During a transcontinental demonstration tour, the trio of green and yellow diesels, geared at 75 mph, were employed in virtually all types of service—both individually and in multiple unit operations—switching, pulling long-distance freights, and handling tightly scheduled commuter trains.

The demonstrators covered more than 30,000 miles of proving operation. They worked on the Delaware & Hudson in the East; the Erie in the East and Midwest; then the Elgin, Joliet & Eastern; the Milwaukee; Northern Pacific; Spokane, Portland & Seattle; and Southern Pacific.

During the demonstration tour, the four-motored DL-701's—with their new design Alco Model 251 12-cylinder engines—time and again developed high adhesions in starting trains at full power with no wheel slip. The turbosupercharged V-type 251 engine is based on years of experience with the company's Model 244 and 539 engines. High volumetric efficiency is said to be the effect of an aftercooler after the supercharger that lowers engine manifold, piston and cylinder temperatures.

Cast iron alloy cylinder heads have replaceable valve seats and stellite-faced valves to assure longer cylinder head life. A wider grooveless center main bearing increases oil film thickness 150 per cent and partially grooved connecting rod bearings take the power stroke loading on a bearing surface uninterrupted by an oil groove. A Ni-resist upper ring groove insert and heat-treated piston rings add durability to pistons and cylinder liners.

The new engine is said to operate virtually without smoking. The new combustion chamber design accounts for nearly smokeless acceleration and clean, steady-state exhaust. High in the Rocky Mountains, the locomotives reportedly rolled from mile-long tunnels without a trace of the usual smoke experienced with other locomotives.

D&H Trials

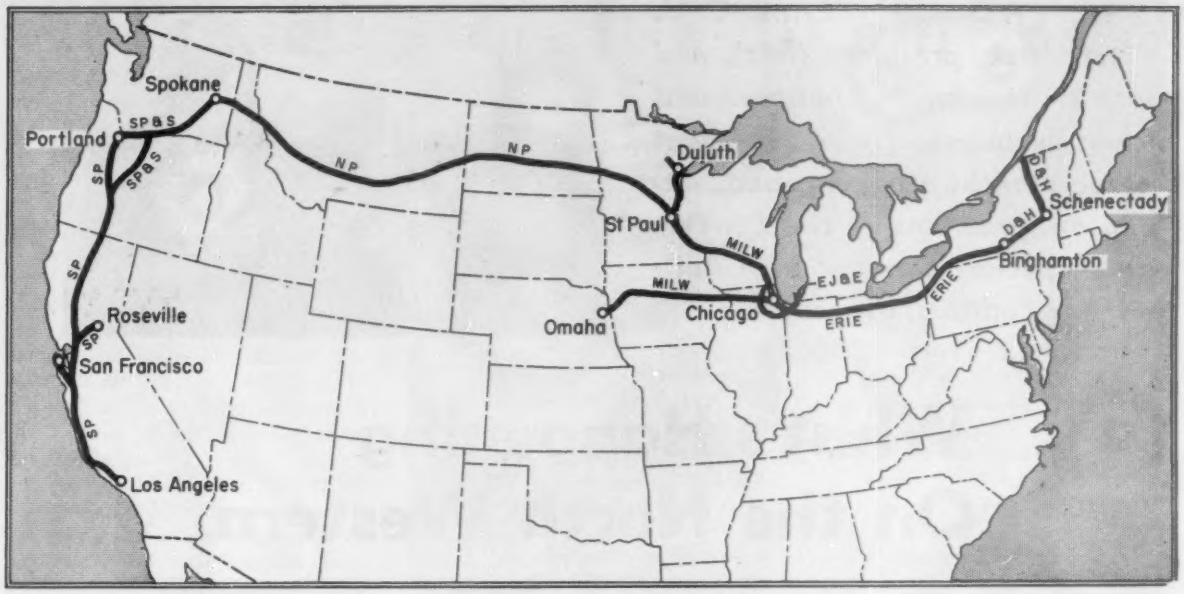
One of the three demonstrators has a steam generator for heating passenger cars. On the Delaware & Hudson the locomotives worked as helpers and in freight service in Northern New York, where the high-capacity dynamic brake, rated at 2,750-hp per unit, impressed D&H crews. This dynamic brake has an automatic feature that holds braking to the maximum allowed limit. Between Fort Edward and Saratoga Springs the units pulled 4,863 tons up a 0.71% grade at 18 mph.

Moving south to the Erie, the 701's got in their licks at fast freight in hauling Erie's No. 77—169 cars totaling 7,280 tons—across the plains of Ohio and Indiana.

February 29 the demonstrators "signed on" with the EJ&E. In four days they made 11 round trips in freight service with one unit hauling as much as 6,500 tons. In six round trips from Gary to South Chicago the trailing tonnage varied from 1,495 to 4,450. Yard limit speed was 15 mph and no sand was used in starting the maximum tonnage with a single DL-701.

In three trips between Kirk Yard and the U. S. Steel plant at Gary, the consists for one unit varied between 40 and 58 empties and 40 to 50 loaded coke cars. A single unit handled between 2,230 and 6,500 tons in one round trip between Kirk Yard and Indiana Harbor. The 6,500-ton load was pulled from a standstill using a sixth-notch start on a wet rail without wheel slip.

TWO DL-701'S ready to leave Los Angeles on the San Pedro local; at other times were in single and three-unit operation.



AFTER CROSSING the nation, three demonstrators (right) were handling freight on the SP coast line between Santa Barbara and Ventura, Cal.

During a brief stint on the Milwaukee, the demonstrators trimmed 108 minutes from the normal 13½-hr running time between Omaha and Bensenville, Ill., hauling 4,882 tons of perishables.

Later, on the run between Milwaukee and St. Paul and train No. 83, the DL-701's slashed 2 hr 17 min from normal 9-hr, 50-min schedule.

Moving West

On the Northern Pacific, the DL-701's got their first test in really frigid temperatures. On a freight run in the Duluth region, crewmen were impressed when a single demonstrator dragged 4,600 tons up a 0.67% grade at 8.5 mph. The dynamic brake again made its mark on this road when—with no air—the three units held 4,000 tons on a 1.0% grade at 25 mph.

Between Helena and Missoula, on a run from St. Paul to Spokane, the three DL-701's replaced four road-freight locomotives and on a 2.2 per cent grade matched the 15 mph averaged by the regular motive power used on the run. Here again the dynamic brake stood out when, from Muir to MP 206—a distance of 78 miles—3,422 tons were held without air on a nearly continuous 1.9% downgrade.

On the Oregon Trunk branch of the SP&S, the demonstrators maintained 14 mph on a 1.8% grade with 3,000 trailing tons. The highlight of this run was an eighth-notch, full power start on a 1.5% grade with no wheel slip.

Southern Pacific Tests

Running in a blizzard on the Southern Pacific from Eugene to Klamath Falls, Ore., the three demonstrators dragged 5,514 tons up a 1.8% grade at 15 mph with four pushers. No slipping was experienced, although the rails were covered with four inches of wet snow and the units were at full power. The maximum allowed tonnage for five road-switchers from Dunsmuir to Grass Lake, Cal., up a long 1.9% grade, is 4,500 tons. The three DL-701's, with the aid of two pushers, dragged 4,878 tons with no trouble.

Moving down the California coast, the three demonstrators took 5,259 tons—one of the heaviest trains ever to run the section—from Oakland to Roseville. On this run a starting test was made on a 1.0% grade on the Martinez bridge approach with the train stretched. The result: only momentary wheel slips at full power stall-start with only two short sand applications.

Near San Luis Obispo, the three units held 4,400 tons at 20 mph on a 2.0% grade, using only the dynamic brake. And later they maintained tight schedules with an SP piggyback "overnight" from Los Angeles to San Francisco.

One DL-701 spent a week in the San Francisco-San Jose commuter service, running the 50 miles with between two and eight cars on each trip. At the same time the other two units were in freight service.

Crews praised Alco's hump control feature—a device consisting of a rheostat that permits precise control of tractive effort without changing throttle position. This not only is invaluable in hump service but is an aid in starting heavy trains.

THIS TWO-MAN TEAM, C. J. Fitzpatrick, president (left), and Ben W. Heineman, chairman and chief executive officer, has spent three months studying, and acting on, problems of the C&NW. In a special interview with Railway Age editors, they explain. . . .

What's Happening On the North Western

Ninety days after they stepped into top roles on the Chicago & North Western, Ben W. Heineman and C. J. Fitzpatrick could give succinct explanation of their most pressing problem:

"We've been plenty busy, up to this time, just shutting off the faucet on costs."

The initial Heineman-Fitzpatrick approach has been almost wholly concerned with operating and maintenance matters. The primary concern has been to shave costs because they see greater operating efficiency as the quickest way to produce dollars.

But they have done more than "shut off the faucet." The dollars saved through operating economies are being pumped back into the property in some far-reaching efforts to bring the railroad out of what Mr. Heineman has publicly called a "run down" condition.

Messrs. Heineman and Fitzpatrick talk frankly about this increased spending on maintenance, machines and modernization at a time when the railroad is rolling up some sizable net losses ($7.9 million in the first five months of 1956). As Mr. Heineman puts it, however, the North Western has to spend money to get back in shape, and the logical place, if not the only one, to get such money is from its own treasury.

Such spending, Mr. Heineman points out, is simply a snowballing operation. "The more you plow back the more new savings you can produce. That's true whether you're scrapping steam engines (which they're doing), eliminating duplicate yard facilities (which they're also doing), or concentrating many car repair shops into one modern integrated shop (which they're doing, too)."

Mr. Heineman was elected chairman and chief executive officer of the C&NW as of April 1, after he and a group of associates had quietly accumulated an impressive chunk of the railroad's stock. Mr. Fitzpatrick, operating vice-president of the Illinois Central, was offered and accepted the presidency of the road because he saw the assignment as probably the greatest challenge in the industry today. He, too, joined the road on April 1.

Even before the two men were officially installed, they were off on the first of a series of personal inspection trips—trips which, they later reported, covered 7,000 miles of the 10,000-mile system in less than six weeks.

From what they saw and learned in these first weeks, a pattern of action swiftly took shape. The first major announcement came May 10: As of the following day, the road would be fully dieselized except for a few yards and switch runs on the northern divisions. And they promised that even these remnants will be

"A GREAT INDUSTRY," SAYS HEINEMAN

Mr. Heineman (unlike Mr. Fitzpatrick, who is a third-generation railroader) is still relatively new in the industry. His first experience was with the Minneapolis & St. Louis where, in 1954, he staged a successful proxy fight for control of the road. Now he finds himself fascinated by what he terms "the greatest industry in the world." His confidence in the business is well illustrated by his comment that "if I didn't think the industry had a future, I wouldn't have gotten myself into the sickest part of it."

The North Western's chief executive officer thinks that many railroad woes today stem from the lack of pricing freedom. "Give us that freedom," he says, and without a subsidy "we can run the wheels off any competition." Railroads are no different from an appliance manufacturer when it comes to pricing the product; the way to get business is to price competitively—then produce cheaper.

cleaned up at the end of this year's ore season.

This stroke-of-the-pen dieselization was primarily the work of Mr. Fitzpatrick. He discovered, upon arrival at the North Western, that the road was using 147 steam engines while 107 diesels (15.2% of ownership) stood idle awaiting repairs.

Hammering away at better utilization, shifting repair practices from a calendar to a mileage basis, and rearranging a handful of local freight runs produced sufficient diesel units to dieselize almost the entire property in 30 days. Meanwhile, the number of out-of-service units dropped below 6%.

Looking back now, Mr. Fitzpatrick says this power problem, while critical, was one that lent itself to quick solution. The same can be said, he believes, about car repair. Studies of the latter were initiated shortly after the new management took over and a decision was forthcoming on June 11: The railroad will consolidate 13 existing repair shops into a single new shop at Clinton, Iowa. This facility, new from the ground up, will handle all car work for the system and will also include capacity for building 1,000 new cars annually. One thing the North Western hopes eventually to lick is its "extremely high" per diem bill.

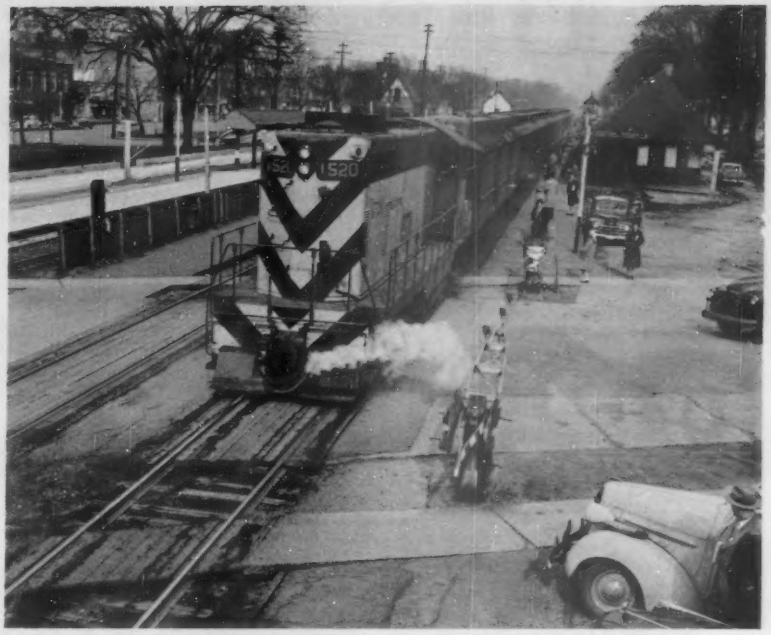
Quite apart from the new car repair shop, however, is the apparent determination, by both Mr. Heineman and Mr. Fitzpatrick, to stabilize on a year-round basis all the road's maintenance and upkeep efforts.

Regular "Plowback"

"What this property needs is a certain amount put into it year after year," Mr. Heineman observes. "If the money isn't spent this year, we know it will have to be spent later on.

"You have to put something back into your track and rolling stock over the entire year, whether the railroad makes money or not."

This statement provides a clue on how the C&NW management is beginning to chop away at deferred maintenance by "regularizing" its spending. Plans for 1956, for example, call for laying more than a million new ties, double the 1955 rate. Until the steel strike clouded the issue, the road hoped to install up to 100 miles of new rail, again doubling last year's figure.



A FACETIOUS COMMENT about commuter service: "If age is inevitable, relax and enjoy it." North Western's new management, recognizing it must stay in the business, plans to upgrade service, use it to promote goodwill, and soft pedal talk of losses. The road operates more than 1,150 suburban trains weekly, and is installing 32 more new double-deckers.

Laying the groundwork for bringing the North Western into up-to-date physical condition, and preparing for its future growth, is a job that runs simultaneously in many directions. Yard and terminal streamlining is a case in point. In the past 60 days, Mr. Fitzpatrick points out, four yards in the Twin Cities have become three; and at Milwaukee, where there are 13 C&NW yards, studies are under way pointing toward wholesale consolidation.

Most intriguing yard on the railroad, however, with respect to either present problems or future potential, is sprawling Proviso, at the edge of Chicago. Proviso actually consists of several sub-yards, and while Mr. Fitzpatrick says he has spent a lot of time studying the operation in recent weeks he still isn't satisfied he has the answer.

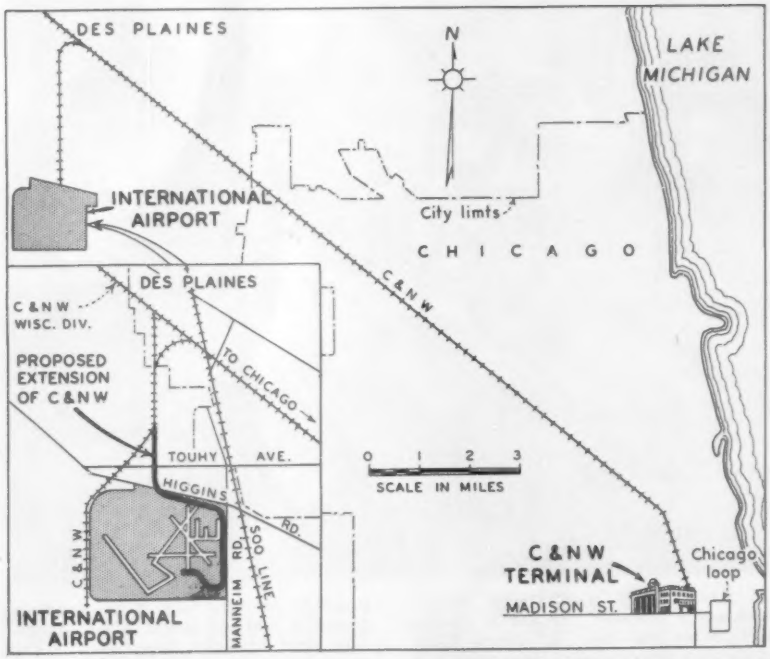
Coupled with the job of smoothing out the kinks at Proviso is another Chicago-area situation which already has attracted the new management's attention. The North Western, with a network of freighthouses inside Chicago, has sometimes been called "a dumping ground," the terminal servant for everybody's LCL. It's an expensive honor. Now, without tipping his hand as to details, Mr. Heineman acknowledges that he and Mr. Fitzpatrick hope to "do something about that situation."

Nor does their disposition to "do something" end here. They are studying branch lines, sidings and passing tracks all over the system to determine which are excess and removable. The North Western has long been accused of having too many branch lines for its own good, but Mr. Heineman suggests this problem is "not as important as we thought at first." Under study, too, is the possibility of single-tracking in some double-track territory by installing centralized traffic control.

A still more recent proposition, and one that fits into the new management's philosophy of doing things new ways, is C&NW's plan to link the railroad's big Chicago passenger terminal with two major airports.

The railroad has suggested to the city that the street-level floor of the station be converted into a consolidated air line ticket office If rates and necessary easements can be agreed upon, the road would then extend its rail lines into O'Hare field to provide fast and frequent rail

Link for Airport and Rail Terminal



C&NW PLAN for high speed rail service could materialize in about six months by adding trackage and making modifications to the terminal.

service to that airport. Space would be provided at the station, meanwhile, for airporter buses serving Midway airport. This combined rail and airport terminal, would be a real pioneering effort.

Dealing with People

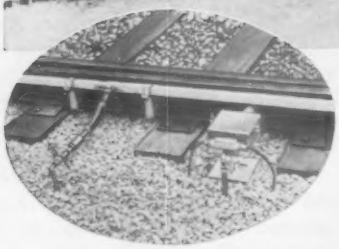
The apparent concern of the Heineman - Fitzpatrick management with the physical aspects of the railroad is, as they see it, merely a case of first things first. Traffic and other departments can be looked at in detail later. Right now, the big job is to work on the transportation ratio.

Nevertheless, other significant things are happening. After 35 years as a departmental railroad, the North Western a few weeks ago shifted back to a divisional setup. As Mr. Fitzpatrick explains that switch, it gives authority and responsibility back to the division superintendent and puts an end to the "super trainmaster" era. The road now has nine divisions, each reporting to a general manager at Chicago. Gone are the four intermediate general superintendents.

This revamping of the organizational structure fits into place with other changes that Mr. Heineman talks about. For one thing, the railroad will start new budgeting procedures. For another, it will adopt, by January 1, 1958, a whole new setup of responsibility accounting. Representatives of the firm of Arthur Andersen & Co. are already on the property, helping lay the groundwork for that change. The organizational streamlining, with clearly outlined job responsibility at all levels, is a prerequisite.

Personnel matters have been getting attention, too, and there have been, as might be expected, a number of job shifts and changes in assignments. Mr. Heineman sees one key responsibility of management as that of forming its own judgment about staff and line officers, then using that judgment to promote from within when vacancies occur. Thus, no outside personnel consulting firm has been involved in either the organization or personnel changes which have occurred to date; and the job of appraising the system's officers in the light of present and future assignments has been left entirely to Mr. Fitzpatrick.

Snow Melting by Remote Control!



White Remote Controls with White gas burning switch heaters are proving dependable and superior IN ACTUAL SERVICE. Control unit in sealed off-rail box, with igniter, tower indicator, automatic relighter. Complete cycle in a few seconds. Gas consumption adjustable for mild or heavy weather. Write for Circular 35-A

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Elkhart 7, Indiana

Railway Officers

(Continued from page 13)

tired. **W. A. Smith,** division engineer, Vancouver, named assistant district engineer, Calgary, succeeding **R. A. Swanson,** promoted to district engineer, Alberta district.

DETROIT TERMINAL.—J. B. Leamy, superintendent, Detroit, Mich., appointed general manager, succeeding **W. C. Smith,** retired. **J. E. Rice** succeeds Mr. Leamy as superintendent.

FLORIDA EAST COAST.—C. D. Lane, Jr., chief accounting officer, St. Augustine, Fla., appointed to newly created post of chief finance and accounting officer at that point.

FRISCO.—Herbert V. Cook, assistant to vice-president, named general freight traffic manager in charge of freight rates, division and commerce, St. Louis. **A. L. Bardgett,** assistant freight traffic manager, appointed freight traffic manager, with headquarters as before at St. Louis. **John V. Flaig,** assistant district manager—sales, Washington, D. C., named district manager—sales, Detroit.

Charles S. Berry, general agent, Tulsa, Okla., promoted to district manager—sales, Cincinnati, succeeding **Elmer K. Yaeger,** retired. **H. B. Blagg,** general agent, Lubbock, Tex., named assistant district manager—sales, to succeed Mr. Berry, and is replaced by **George T. Ikard, Jr.,** traffic representative, Pittsburgh. **James T. Walker,** traffic representative at New York, transferred to Washington, D.C., as assistant district manager—sales. **W. Ray Keeley,** general agent, passenger department, Los Angeles, named assistant district manager—sales, Seattle.

J. F. Christian appointed assistant superintendent, Creek and Sherman Subdivisions, Tulsa, Okla. **R. E. Tyndall** and **S. E. Zeilmann** named terminal trainmasters at Birmingham, Ala. and Springfield, Mo., respectively.

PULLMAN COMPANY.—A. B. Nee, agent at Toronto, Ont., Can., appointed superintendent there. **G. P. Johnson,** assistant superintendent, Buffalo, N. Y., appointed agent at Albany., N. Y.

RAILWAY EXPRESS AGENCY.—John G. MacFarlan, general agent—traffic, Washington, D.C., appointed special representative, executive department, at that point.

ST. JOHNSBURY & LAMOILLE COUNTY.—R. W. Stewart, traffic manager, Deep Freeze Division, Motor Products Corporation of North Chicago, appointed general western agent, STJ&LC, Chicago.

TEXAS & PACIFIC.—H. C. Moore, transportation inspector, Fort Worth, Tex., appointed superintendent special service, Dallas, Tex., succeeding **E. E. Smith,** who retired July 31.

TEXAS CITY TERMINAL.—W. P. Ludwig, Jr., assistant to president and general manager, Texas City, Texas., elected president and general manager, succeeding **Frank J. Heiling,** appointed vice-president in charge of industrial development of the Katy at Dallas.

UNION PACIFIC.—Harold M. Turner, superintendent of transportation, Portland, Ore., has retired.

WABASH.—Leo E. Clarahan, vice-president—traffic at St. Louis, retired August 1.

WESTERN MARYLAND.—S. K. Bonebrake appointed supervisor locomotive performance, Hagerstown, Md., succeeding **W. O. Cottingham,** promoted.

OBITUARY

H. Gifford Till, 61, director of industrial research and development of the **Missouri-Kansas-Texas,** died July 16 at Dallas, Tex.

SIX MAJOR RAILROADS *Speed up Weighing*

. . . with Cox & Stevens Electronic Track Scales

Eleven Cox and Stevens track scales on six major railroads are weighing cars in motion accurately and quickly . . . reducing costs and easing the car shortage by getting freight rolling sooner. Linked up with automatic tabulating systems, these scales also eliminate errors in paper work and cut down on accounting time. Two other railroads have specified Cox and Stevens scales for installation this year.

Cox and Stevens track scales are well past the experimental stage. Since the pioneer installation in 1949, they've been tried, tested . . . and reordered. Southern Railway, for example, bought its first Cox and Stevens scale for Birmingham in 1952, its second for Chattanooga in 1955, and its third for Atlanta in 1956.

See what Cox and Stevens electronic track scales can do to reduce weighing costs, improve utilization of rolling stock and speed up record keeping. Send for Bulletin No. 3003, "A Test Report on Cox and Stevens Electronic Track Scales."

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KEY TO RAILROAD PROGRESS . . . ELECTRICAL PIONEERING

General Electric-Equipped Multiple-Unit Cars Provide Better Service, Lower Operating Costs for the New Long Island Rail Road

Seventy-four modern General Electric-equipped Multiple-Unit Cars, recently delivered to the Long Island Rail Road as part of a twelve-year, $60,300,000 rehabilitation program are providing better service and reducing operating costs. Each of these new cars is equipped with four high-speed G-E truck-frame-mounted motors which are capable of providing fast acceleration and higher schedule speeds. Passengers enjoy smooth, quiet performance. Proven equipment operation and reliability will greatly reduce maintenance costs and "out-of-service" time.

The Long Island, the nation's busiest passenger railroad, carries 285,000 commuters daily between New York and the rapidly growing Long Island suburban area. Ask your local G-E Apparatus sales representative for more information or write Section 135-4, General Electric Co., Locomotive and Car Equipment Department, Erie, Pa.

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Freight Operating Statistics of Large Railways—Selected Items

Region, Road and Year		Miles of road operated	Locomotive Miles: Train miles	Locomotive Miles: Principal and helper	Locomotive Miles: Light	Car Miles: Loaded (thousands)	Car Miles: Per cent loaded	Ton-miles (thousands): Gross excl.locos. & tenders	Ton-miles (thousands): Net rev. and non-rev.	Road-locos.on lines: Serviceable: Unstored	Road-locos.on lines: Serviceable: Stored	Road-locos.on lines: B.O.	Road-locos.on lines: Per cent B.O.
New Eng. Region	Boston & Maine	1956	1,562	265,954	271,870	11,988	10,275	63.8	683,028	263,340	65	..	1	1.5
		1955	1,564	243,859	251,196	10,887	10,078	64.2	655,331	248,318	70	1	5	6.6
	N. Y., N. H. & Hfd	1956	1,746	279,220	279,504	16,366	12,207	65.5	773,299	306,857	85	..	12	12.4
		1955	1,746	276,595	276,483	17,330	12,154	66.9	747,037	293,236	91	..	7	7.1
Great Lakes Region	Delaware & Hudson	1956	792	183,475	189,087	7,188	9,952	69.3	682,864	350,212	42	1	..	..
		1955	792	180,004	186,140	10,375	9,252	66.0	634,271	309,835	35	6	2	4.7
	Del., Lack. & Western	1956	962	305,633	319,695	29,319	12,879	67.4	857,973	373,232	61	..	..	..
		1955	962	274,774	287,310	20,435	12,268	68.6	780,726	332,182	61	..	2	3.2
	Erie	1956	2,225	587,354	593,874	20,248	33,043	68.4	2,053,457	826,979	163	..	2	1.2
		1955	2,224	545,302	553,100	13,639	30,841	69.2	1,865,086	741,150	162	..	2	1.2
	Grand Trunk Western	1956	951	306,751	315,644	2,429	9,088	57.2	675,883	270,216	55	..	19	25.7
		1955	952	276,562	282,675	2,090	9,118	59.8	646,708	250,335	58	..	24	29.3
	Lehigh Valley	1956	1,137	233,290	236,430	7,966	10,633	63.8	751,475	344,712	34	..	1	2.9
		1955	1,142	201,075	204,146	5,641	10,352	66.7	685,229	306,734	33	..	1	2.9
	New York Central	1956	10,565	2,534,908	2,580,033	127,650	103,003	60.9	7,440,289	3,315,854	535	5	93	14.7
		1955	10,661	2,506,717	2,552,139	98,352	101,958	62.0	7,134,695	3,123,229	566	63	83	11.7
	New York, Chic. & St. L.	1956	2,154	753,530	776,262	8,237	32,285	65.3	2,286,971	1,033,942	173	..	23	11.7
		1955	2,155	709,169	733,661	7,103	30,696	66.8	2,079,549	924,674	165	19	32	14.8
	Pitts. & Lake Erie	1956	221	71,390	71,390	....	3,140	65.7	274,181	169,540	15	..	..	..
		1955	221	59,602	59,806	....	2,812	69.6	241,169	152,421	14	7	..	..
	Wabash	1956	2,381	501,604	503,662	5,768	23,079	65.2	1,525,836	599,644	109	..	..	..
		1955	2,381	539,627	540,302	7,217	24,668	66.9	1,564,752	600,568	104	..	..	..
Central Eastern Region	Baltimore & Ohio	1956	5,910	1,664,720	1,871,166	174,963	64,680	62.9	5,488,592	2,690,537	445	..	78	14.9
		1955	6,072	1,544,146	1,710,423	151,613	63,574	61.8	4,933,191	2,380,527	442	10	90	16.6
	Bessemer & Lake Erie	1956	208	49,895	53,914	156	2,465	60.6	286,710	183,884	16	..	..	..
		1955	208	39,896	42,300	114	1,968	61.6	233,440	152,633	16	..	..	..
	Central RR Co. of New Jersey	1956	612	128,137	129,257	6,244	5,009	66.0	367,646	189,887	65	..	4	5.8
		1955	613	119,307	120,097	5,168	4,651	65.7	341,160	175,413	58	..	11	15.9
	Chicago & Eastern Ill.	1956	868	122,424	122,424	2,642	5,334	67.9	376,805	184,704	28	..	2	6.6
		1955	868	108,179	108,179	2,474	5,297	65.5	353,657	170,875	27	..	1	3.6
	Elgin, Joliet & Eastern	1956	236	94,590	94,861	....	2,938	61.8	243,036	130,631	37	..	3	7.5
		1955	236	83,397	83,700	....	2,714	62.5	219,956	117,391	35	3	3	7.3
	Pennsylvania System	1956	9,892	3,051,098	3,257,769	244,640	133,770	65.4	9,758,832	4,676,385	798	15	373	31.5
		1955	9,892	2,809,889	2,989,006	201,662	122,451	64.7	8,629,134	3,974,014	762	108	458	34.5
	Reading	1956	1,305	375,500	378,242	13,267	14,607	63.5	1,192,385	643,534	159	7	27	14.0
		1955	1,304	315,935	318,142	12,147	12,328	61.1	999,971	512,033	156	7	27	14.2
	Western Maryland	1956	846	174,197	180,401	9,704	6,952	61.4	596,603	334,265	37	..	1	2.6
		1955	847	161,372	167,881	10,007	6,256	60.9	524,319	288,263	36	..	1	2.7
Pocahontas Region	Chesapeake & Ohio	1956	5,067	1,567,926	1,589,188	43,664	65,048	56.4	5,742,174	3,159,163	480	12	153	21.3
		1955	5,046	1,462,638	1,483,344	41,753	63,683	57.9	5,436,335	2,999,817	378	25	181	31.0
	Norfolk & Western	1956	2,103	769,068	817,265	64,026	36,318	58.1	3,504,471	1,944,624	235	4	12	4.8
		1955	2,110	676,286	722,274	58,548	34,093	59.2	3,124,253	1,702,265	217	25	28	10.4
Southern Region	Atlantic Coast Line	1956	5,278	907,281	907,284	10,120	28,442	58.3	2,156,426	927,234	215	..	5	2.3
		1955	5,334	892,084	892,084	10,577	29,464	57.0	2,180,437	957,657	237	..	7	2.9
	Central of Georgia	1956	1,731	202,020	202,020	1,818	7,931	68.2	556,867	271,776	76	..	2	2.6
		1955	1,731	194,767	194,793	2,001	8,584	72.2	565,763	277,055	73	..	4	5.2
	Gulf, Mobile & Ohio	1956	2,717	270,740	270,740	111	15,795	70.4	1,060,527	517,890	86	..	5	5.5
		1955	2,717	292,377	292,377	288	17,975	71.9	1,186,184	572,898	88	..	1	1.1
	Illinois Central	1956	6,532	1,176,220	1,177,322	35,097	50,205	63.4	3,702,749	1,767,036	311	7	137	30.1
		1955	6,539	1,292,536	1,294,575	40,109	54,172	63.0	3,886,031	1,774,938	377	61	211	32.5
	Louisville & Nashville	1956	4,714	856,300	860,887	16,626	32,609	63.5	2,452,564	1,249,008	182	16	25	11.2
		1955	4,715	189,216	189,277	2,946	5,980	64.3	481,227	264,206	164	75	7	2.8
	Nash., Chatt. & St. Louis	1956	1,043	173,116	177,647	4,306	5,905	71.5	387,584	187,989	50	..	3	5.7
		1955	1,043	37,702	37,702	166	1,450	70.3	93,946	44,566	47	..	6	11.3
	Seaboard Air Line	1956	4,051	685,890	685,890	2,885	27,135	63.0	1,989,387	888,658	138	..	11	7.4
		1955	4,053	649,018	649,018	2,559	26,757	61.6	1,989,112	870,628	135	..	9	6.3
	Southern	1956	6,259	896,059	896,119	13,233	43,375	67.7	2,847,367	1,319,758	279	..	2	.7
		1955	6,264	988,474	988,534	15,935	49,731	68.9	3,234,406	1,514,378	279	..	1	.4
Northwestern Region	Chicago & North Western	1956	7,810	698,646	699,795	8,129	29,828	66.9	2,050,825	894,840	146	9	22	12.4
		1955	7,848	703,086	705,068	9,203	29,965	66.7	2,018,288	928,915	142	22	35	17.6
	Chicago Great Western	1956	1,437	131,604	131,604	202	7,718	71.8	508,908	240,152	31	..	2	6.1
		1955	1,437	134,045	134,045	210	7,797	69.7	511,221	231,924	30	..	3	9.1
	Chic., Milw., St. P. & Pac.	1956	10,633	924,369	939,279	16,878	41,083	66.5	2,796,197	1,274,630	276	7	13	4.4
		1955	10,633	957,397	974,457	18,230	41,420	65.3	2,794,418	1,230,401	256	52	25	7.5
	Chic., St. P., Minn. & Omaha	1956	1,606	155,169	156,089	3,894	5,076	65.4	351,535	151,549	42	13	17	23.6
		1955	1,606	165,106	166,046	4,771	5,004	65.9	338,902	144,706	60	..	12	16.7
	Duluth, Missabe & Iron Range	1956	569	105,498	106,253	1,506	4,639	50.5	475,841	286,640	70	..	7	9.1
		1955	569	88,087	88,498	1,067	3,555	51.3	380,785	232,244	57	5	6	8.8
	Great Northern	1956	8,272	1,139,347	1,147,849	37,228	46,150	69.1	3,297,189	1,630,765	277	45	40	11.0
		1955	8,270	1,117,281	1,123,295	31,363	41,999	65.8	3,003,776	1,394,903	231	144	47	11.1
	Minneap., St. P. & S. Ste. M.	1956	4,171	380,277	381,596	1,319	13,356	66.2	899,511	411,199	90	10	3	2.9
		1955	4,171	372,344	374,124	2,162	12,334	69.8	879,669	365,196	85	11	6	5.9
	Northern Pacific	1956	6,569	829,700	844,660	20,069	35,207	67.6	2,370,674	1,067,685	233	72	44	12.6
		1955	6,570	842,254	877,075	27,278	32,404	66.0	2,338,253	1,034,369	288	25	60	16.1
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1956	13,124	2,474,597	2,585,518	65,508	113,865	64.4	7,804,262	3,025,218	518	48	65	10.3
		1955	13,098	2,442,112	2,542,479	59,955	115,674	63.7	7,805,301	2,917,718	519	81	29	4.6
	Chic., Burl. & Quincy	1956	8,771	1,010,925	1,005,819	23,305	46,278	70.5	2,989,678	1,339,694	199	43	45	15.7
		1955	8,807	1,063,686	1,059,052	37,609	45,918	70.1	2,894,834	1,280,165	209	58	25	8.6
	Chic., Rock I. & Pac.	1956	7,580	914,655	910,656	1,158	36,428	63.2	2,609,314	1,111,125	169	..	6	3.4
		1955	7,904	871,200	867,794	1,483	35,913	64.8	2,464,154	1,025,647	170	4	1	.6
	Denver & R. G. Wn.	1956	2,155	268,165	287,974	27,237	14,244	71.5	961,832	465,152	66	12	20	20.4
		1955	2,165	291,193	311,865	30,446	14,250	67.3	1,004,739	471,135	60	42	25	19.7
	Southern Pacific	1956	8,055	2,124,888	2,222,102	154,641	97,423	64.3	6,810,611	2,843,039	645	122	64	7.7
		1955	8,072	2,197,809	2,315,039	194,606	99,388	64.3	6,855,130	2,800,726	633	52	100	12.7
	Union Pacific	1956	9,804	2,075,550	2,122,202	83,730	101,567	67.8	6,649,660	2,868,742	364	150	112	17.9
		1955	9,813	2,261,821	2,304,565	108,294	102,285	64.1	6,960,696	2,898,937	409	202	123	16.8
	Western Pacific	1956	1,190	233,115	253,639	16,781	10,871	70.8	703,163	313,842	44	..	2	4.3
		1955	1,190	230,479	245,742	16,869	10,478	67.4	714,443	319,977	40	..	..	..
Southwestern Region	Kansas City Southern	1956	886	151,696	151,702	236	8,603	67.4	622,798	287,150	25	..	2	7.4
		1955	886	145,131	145,135	456	8,383	68.0	572,134	258,377	25	..	3	10.7
	Louisiana & Arkansas	1956	746	96,135	96,135	46	4,269	65.5	327,744	155,347	18	..	..	..
		1955	753	96,128	96,128	213	4,008	65.7	295,880	140,732	13	..	..	..
	Mo.-Kans.-Texas Lines	1956	3,230	328,243	328,243	3,410	14,222	66.3	936,079	408,436	85	..	3	3.4
		1955	3,230	328,479	328,479	3,558	13,873	64.7	902,608	381,683	86	..	..	..
	Missouri Pacific	1956	9,709	1,273,005	1,273,005	10,119	56,370	64.5	3,955,962	1,763,741	335	..	34	9.2
		1955	9,702	1,288,851	1,288,851	11,338	54,614	64.3	3,830,606	1,676,459	334	35	98	21.0
	Texas & Pacific	1956	1,822	307,813	307,813	3,766	14,308	62.1	1,058,564	413,485	59	..	1	1.7
		1955	1,822	315,699	315,699	2,981	14 754	66.9	996,566	393,399	60	..	1	1.6
	St. Louis-San Francisco	1956	4,573	596,767	596,767	5,734	25,266	69.5	1,669,914	779,391	92	..	6	5.8
		1955	4,564	612,856	613,460	5,798	25,902	68.5	1,705,872	776,679	116	..	5	4.1
	St. Louis Southw. Lines	1956	1,554	342,210	342,224	1,618	16,254	70.3	1,024,907	458,148	53	..	2	3.6
		1955	1,554	306,734	306,740	1,463	15,740	70.3	971,630	434,332	57	1	15	20.5
	Texas & New Orleans	1956	4,302	701,142	701,142	3,912	28,568	64.3	1,992,995	870,711	139	..	5	3.5
		1955	4,302	678,405	678,405	5,051	28,833	66.8	1,955,808	861,390	133	..	4	2.9

For the Month of April 1956 Compared with April 1955

Region, Road and Year		Freight cars on line				G.t.m. per train-hr. excl. locos and tenders	G.t.m. per train-mi. excl. locos and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Car-miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
		Home	Foreign	Total	Per Cent B.O.									
New Eng. Region														
Boston & Maine	1956	1,560	8,366	9,926	2.7	40,824	2,576	993	25.6	800	48.9	5,620	15.9	158.9
	1955	2,591	8,132	10,723	5.0	42,326	2,695	1,021	24.6	789	49.9	5,292	15.8	129.8
N. Y., N. H. & Hfd.	1956	2,040	18,793	20,833	2.2	43,363	2,769	1,099	25.1	474	28.8	5,858	15.7	126.4
	1955	2,242	14,759	17,001	2.1	45,573	2,701	1,060	24.1	572	35.4	5,598	16.9	126.8
Great Lakes Region														
Delaware & Hudson	1956	1,591	6,367	7,958	4.3	64,628	3,738	1,917	35.2	1,452	59.5	14,740	17.4	169.4
	1955	4,862	4,596	9,458	5.2	66,084	3,541	1,730	33.5	1,031	46.6	13,040	18.8	163.3
Del., Lack. & Western	1956	3,256	12,734	15,990	2.3	49,677	2,852	1,241	29.0	766	39.2	12,933	17.7	211.0
	1955	6,046	9,138	13,184	3.0	51,306	2,892	1,231	27.1	714	38.4	11,510	18.1	177.2
Erie	1956	6,820	21,781	28,601	2.1	66,973	3,530	1,422	25.0	980	57.3	12,389	19.2	137.9
	1955	8,633	17,834	26,467	4.5	66,112	3,449	1,371	24.0	974	58.6	11,108	19.3	128.4
Grand Trunk Western	1956	3,952	10,287	14,239	7.1	47,894	2,228	891	29.7	650	38.2	9,471	21.7	149.9
	1955	4,083	8,651	12,734	8.7	51,543	2,354	911	27.5	653	39.8	8,765	22.0	128.1
Lehigh Valley	1956	7,902	8,240	16,142	4.5	68,397	3,276	1,503	32.4	715	34.6	10,106	21.2	251.0
	1955	9,070	7,945	17,015	3.9	69,900	3,427	1,534	29.6	603	30.5	8,953	20.5	219.0
New York Central	1956	49,816	96,259	146,075	3.5	51,264	2,990	1,332	32.2	765	39.0	10,462	17.5	158.1
	1955	65,712	83,786	149,498	6.3	51,269	2,879	1,260	30.6	697	36.7	9,765	18.0	139.0
New York, Chic. & St. L.	1956	5,948	19,329	25,277	3.9	53,387	3,098	1,401	32.0	1,350	64.6	16,000	17.6	144.3
	1955	8,492	17,032	25,524	7.9	52,993	2,999	1,333	30.1	1,223	60.8	14,303	18.1	128.3
Pitts. & Lake Erie	1956	2,839	9,106	11,945	4.1	60,956	3,872	2,394	54.0	475	13.4	25,572	15.9	184.6
	1955	5,073	6,577	11,650	6.2	60,702	4,058	2,565	54.2	403	10.7	22,990	15.0	100.8
Wabash	1956	8,784	10,247	19,031	4.8	67,289	3,056	1,201	26.0	1,048	61.9	8,395	22.1	169.3
	1955	8,327	10,258	18,585	7.0	63,823	2,914	1,119	24.3	1,068	65.6	8,408	22.0	186.4
Central Eastern Region														
Baltimore & Ohio	1956	45,772	51,612	97,384	4.3	50,461	3,351	1,643	41.6	922	35.3	15,175	15.3	135.3
	1955	54,388	47,803	102,191	14.1	49,762	3,241	1,564	37.4	789	34.1	13,068	15.6	123.3
Bessemer & Lake Erie	1956	4,288	1,274	5,562	11.8	92,338	5,917	3,795	74.6	1,045	23.1	29,469	16.1	125.9
	1955	5,563	920	6,483	21.7	90,411	6,061	3,963	77.6	770	16.1	24,460	15.5	102.7
Central RR Co. of New Jersey	1956	2,167	11,866	14,033	6.0	40,913	3,026	1,563	37.9	459	18.4	10,342	14.3	89.4
	1955	4,798	9,102	13,900	8.2	42,103	2,971	1,528	37.7	412	16.6	9,538	14.7	80.1
Chicago & Eastern Ill.	1956	2,528	3,450	5,978	6.5	53,274	3,086	1,512	34.6	1,035	44.0	7,093	17.3	146.8
	1955	2,873	3,890	6,763	4.9	50,378	3,278	1,584	32.3	824	39.0	6,562	15.4	143.0
Elgin, Joliet & Eastern	1956	6,618	10,324	16,942	5.9	20,917	2,701	1,452	44.5	248	9.0	18,451	8.1	102.7
	1955	7,495	8,898	16,393	6.1	23,447	2,737	1,461	43.3	241	8.9	16,581	8.9	91.5
Pennsylvania System	1956	97,843	93,621	191,464	6.3	54,961	3,281	1,572	35.0	812	35.5	15,758	17.2	107.8
	1955	114,791	90,114	204,905	14.3	54,942	3,150	1,451	32.5	648	30.9	13,391	17.9	87.6
Reading	1956	10,027	23,492	33,519	3.4	49,584	3,176	1,714	44.1	654	23.4	16,438	15.6	81.0
	1955	14,790	15,726	30,516	6.1	48,736	3,165	1,621	41.5	537	21.2	13,089	15.4	69.5
Western Maryland	1956	4,093	4,719	8,812	2.5	50,051	3,503	1,963	48.1	1,217	41.2	13,170	14.6	187.9
	1955	4,969	2,910	7,879	6.2	47,007	3,281	1,804	46.1	1,179	42.0	11,344	14.5	181.2
Poca-hontas Region														
Chesapeake & Ohio	1956	48,040	35,470	83,510	1.5	70,743	3,691	2,031	48.6	1,269	46.3	28,783	19.3	94.3
	1955	51,365	30,760	82,125	4.3	70,104	3,737	2,062	47.1	1,197	43.9	19,816	18.9	93.7
Norfolk & Western	1956	31,560	9,862	41,422	1.7	78,965	4,686	2,600	53.5	1,513	48.6	30,823	17.3	126.2
	1955	31,959	7,879	39,838	1.8	80,776	4,753	2,590	49.9	1,415	47.9	26,892	17.5	104.3
Southern Region														
Atlantic Coast Line	1956	17,251	18,481	35,732	4.4	46,215	2,389	1,027	32.6	849	44.7	5,856	19.4	150.7
	1955	19,293	18,061	37,354	3.4	44,588	2,454	1,078	32.5	850	45.9	5,985	18.2	136.6
Central of Georgia	1956	2,179	6,823	9,002	4.3	48,925	2,761	1,348	34.3	985	42.2	5,234	17.7	95.6
	1955	2,867	6,356	9,223	4.6	49,321	2,919	1,430	32.3	939	40.3	5,335	17.0	95.0
Gulf, Mobile & Ohio	1956	4,585	10,470	15,055	5.1	75,568	3,925	1,917	32.8	1,117	48.4	6,354	19.3	107.6
	1955	4,810	11,234	16,044	2.4	78,738	4,071	1,966	31.9	1,143	49.9	7,029	19.4	118.0
Illinois Central	1956	22,640	27,717	50,357	2.5	53,729	3,195	1,525	35.2	1,138	51.0	9,017	17.1	97.4
	1955	26,283	26,446	52,729	2.4	51,415	3,045	1,391	32.8	1,135	55.0	9,048	17.1	74.2
Louisville & Nashville	1956	26,903	15,581	42,484	3.6	50,324	2,871	1,462	38.3	961	39.5	8,832	17.6	141.5
	1955	32,358	6,942	39,300	3.8	57,993	2,551	1,401	44.2	221	7.8	1,868	22.8	28.0
Nash., Chatt. & St. Louis	1956	3,449	4,188	7,637	3.8	42,789	2,243	1,088	31.8	845	37.1	6,008	19.1	126.5
	1955	4,034	2,623	6,657	3.9	41,277	2,501	1,186	30.7	220	10.2	1,424	16.6	24.6
Seaboard Air Line	1956	11,386	15,908	27,294	2.5	54,531	2,968	1,326	32.7	1,063	51.6	7,312	18.8	178.4
	1955	12,225	14,498	26,723	3.8	57,085	3,112	1,362	32.3	1,077	53.7	7,160	18.6	175.9
Southern	1956	15,819	27,181	43,000	2.5	54,733	3,189	1,478	30.6	1,042	50.6	7,029	17.2	117.5
	1955	18,174	26,925	45,099	4.2	54,875	3,298	1,544	30.5	1,119	53.4	8,059	16.8	128.4
Northwestern Region														
Chicago & North Western	1956	16,508	28,806	45,314	4.3	53,751	2,985	1,303	30.0	668	33.3	3,819	18.3	145.8
	1955	17,689	26,786	44,475	4.4	53,109	2,920	1,344	31.0	709	34.3	3,945	18.5	132.6
Chicago Great Western	1956	1,404	4,385	5,789	2.6	75,934	3,874	1,828	31.1	1,458	65.3	5,571	19.6	139.1
	1955	1,710	3,832	5,542	2.6	72,824	3,820	1,733	29.7	1,329	64.1	5,380	19.1	141.9
Chic., Milw., St. P. & Pac.	1956	27,828	31,708	59,536	6.0	58,411	3,032	1,382	31.0	708	34.3	3,996	19.3	115.4
	1955	33,038	27,926	60,964	3.9	56,598	2,928	1,289	29.7	657	33.9	3,857	19.4	107.2
Chic., St. P., Minn. & Omaha	1956	1,130	8,247	9,377	3.5	34,133	2,289	987	29.9	538	27.5	3,145	15.1	81.4
	1955	1,138	7,209	8,347	5.8	31,324	2,071	884	28.9	581	30.5	3,803	15.3	86.6
Duluth, Missabe & Iron Range	1956	14,292	670	14,962	2.0	73,580	4,854	2,924	61.8	650	20.8	16,792	16.3	58.4
	1955	13,723	756	14,479	1.6	70,542	4,628	2,823	65.3	523	15.6	13,605	16.3	52.7
Great Northern	1956	20,133	22,661	42,794	3.0	56,123	2,935	1,452	35.3	1,270	52.0	6,571	19.4	115.8
	1955	22,421	20,400	42,821	3.0	52,923	2,718	1,262	33.2	1,102	50.5	5,622	19.7	96.5
Minneap., St. P. & S. Ste. M.	1956	6,106	8,905	15,011	4.7	50,722	2,374	1,085	30.8	910	44.6	3,286	21.4	141.7
	1955	7,101	6,900	14,001	7.2	49,817	2,376	986	29.6	884	42.8	2,919	21.1	128.5
Northern Pacific	1956	18,120	16,770	34,890	5.9	57,772	2,873	1,294	30.3	981	47.8	5,418	20.2	88.0
	1955	19,436	16,666	36,102	4.9	56,060	2,787	1,233	31.9	931	44.2	5,248	20.2	87.6
Central Western Region														
Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1956	48,075	38,118	86,193	3.4	74,549	3,163	1,226	26.6	1,190	69.6	7,684	23.6	146.9
	1955	52,763	32,704	85,467	4.6	74,111	3,209	1,200	25.2	1,121	69.8	7,425	23.2	146.8
Chic., Burl. & Quincy	1956	17,404	23,488	40,892	3.9	63,848	2,963	1,328	28.9	1,099	53.9	5,091	21.6	126.3
	1955	22,383	21,531	43,914	3.4	57,889	2,726	1,206	27.9	966	49.5	4,845	21.3	130.1
Chic., Rock I. & Pac.	1956	11,478	19,901	31,379	3.9	59,628	2,860	1,218	30.5	1,174	60.9	4,886	20.9	181.4
	1955	13,990	19,338	33,328	4.3	57,858	2,835	1,180	28.6	1,074	58.0	4,325	20.2	174.5
Denver & R. G. Wn.	1956	7,399	6,013	13,412	3.1	71,094	3,596	1,729	32.7	1,153	49.4	7,195	19.8	111.2
	1955	7,835	5,739	13,574	3.2	68,141	3,459	1,622	33.1	1,114	50.1	7,254	19.7	94.9
Southern Pacific	1956	30,527	47,737	78,264	2.1	62,211	3,241	1,353	29.2	1,235	65.8	11,765	19.4	105.1
	1955	32,243	48,240	80,483	1.8	60,456	3,152	1,288	28.2	1,206	66.5	11,566	19.4	114.1
Union Pacific	1956	28,051	34,237	62,288	1.8	81,522	3,228	1,393	28.2	1,557	81.3	9,754	25.4	120.3
	1955	30,712	33,423	64,135	2.6	80,157	3,107	1,294	28.3	1,501	82.6	9,847	26.0	111.4
Western Pacific	1956	2,202	4,278	6,480	1.9	78,173	3,043	1,358	28.9	1,571	76.9	8,791	25.9	202.7
	1955	2,489	3,570	6,059	1.8	76,575	3,125	1,400	30.5	1,717	83.4	8,963	24.7	216.4
Southwestern Region														
Kansas City Southern	1956	1,234	6,490	7,724	2.2	85,726	4,131	1,905	33.4	1,247	55.4	10,803	20.9	225.3
	1955	1,286	5,904	7,190	3.5	84,448	3,958	1,787	30.8	1,184	56.5	9,721	21.4	189.2
Louisiana & Arkansas	1956	1,521	3,751	5,272	5.0	68,566	3,414	1,618	36.4	964	40.4	6,941	20.1	217.3
	1955	1,329	3,187	4,507	4.9	51,422	3,082	1,466	35.1	989	42.9	6,230	16.7	271.7
Mo.-Kans.-Texas Lines	1956	3,946	6,974	10,920	5.9	62,173	2,859	1,248	28.7	1,228	64.5	4,215	21.8	134.4
	1955	4,939	6,334	11,273	9.7	58,489	2,756	1,165	27.5	1,150	64.6	3,939	21.3	137.7
Missouri Pacific	1956	21,396	30,631	52,027	5.1	65,956	3,131	1,396	31.3	1,138	56.4	6,055	21.2	122.7
	1955	25,456	27,258	52,714	2.7	65,238	2,994	1,310	30.7	1,066	54.0	5,760	22.0	102.1
Texas & Pacific	1956	2,525	6,517	9,042	3.3	76,903	3,456	1,350	28.9	1,462	81.5	7,565	22.4	183.3
	1955	3,014	6,268	9,282	3.0	71,690	3,169	1,251	26.7	1,384	77.6	7,197	22.7	189.6
St. Louis-San Francisco	1956	11,398	10,744	22,142	3.1	57,050	2,809	1,311	30.8	1,151	53.7	5,681	20.4	212.3
	1955	13,181	10,715	23,900	3.4	53,137	2,790	1,270	30.0	1,055	51.4	5,673	19.1	186.6
St. Louis Southw. Lines	1956	1,720	5,019	6,739	1.7	63,770	3,007	1,344	28.2	2,188	110.5	9,827	21.3	214.2
	1955	1,838	5,065	6,903	1.5	64,308	3,172	1,418	27.6	2,061	106.3	9,316	20.3	150.2
Texas & New Orleans	1956	5,428	17,176	22,604	1.4	59,085	2,862	1,250	30.5	1,288	60.7	6,747	20.8	179.2
	1955	6,144	15,402	21,546	2.5	60,906	2,901	1,278	29.9	1,334	66.9	6,674	21.1	176.8

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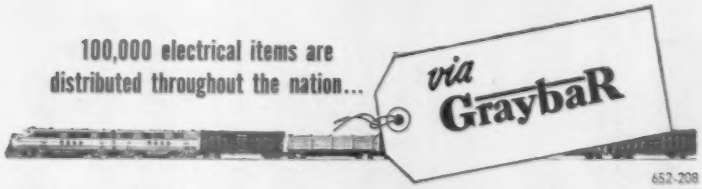

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VICISSITUDES OF THE SOUTH CAROLINA RAILROAD, 1865-1878: A CASE STUDY IN RECONSTRUCTION AND REGIONAL TRAFFIC DEVELOPMENT, by James F. Doster. The Business History Review, June, 1956, pp 175-195. Graduate School of Business Administration, Harvard University, 217 Baker Library, Soldiers Field, Boston 63.

Although the South Carolina made bold moves to acquire the trunk lines and feeder systems that would make Charleston a gateway to the west, frustrating forces were at work. Developing traffic patterns did not favor Charleston, and multiplication of competing lines cut into existing business.

WABASH RAILROAD ADS STRESS I.S MODERNIZATION. Advertising Age, July 9, 1956, pp 2 & 83. Advertising Publications, Inc., 200 E. Illinois st., Chicago 11. Single copies, 15¢.

Cashing in on its $125,000,000 postwar modernization program, the Wabash is conducting a national campaign to sell its personality as a modern railroad. Using newspapers, TV, magazines and business publications, the campaign is beamed at two major audiences—potential passengers and business men interested in modern rail shipment of freight.

PAMPHLETS

1956 NATIONAL DIRECTORY OF SAFETY FILMS. National Safety Council, 425 N. Michigan ave., Chicago 11. $1.

The directory provides a compact source of information on films on safety, first aid, fire prevention and civil defense. It describes more than 1,200 films that are available. Information includes millimeter, running time, color, year of production and a brief summary of the plot.

INDUSTRY'S VIEW; The Constitution and the Right to Work. 4 pages. National Association of Manufacturers, 2 E. 48th st., New York 17. 5 cents a copy; $3.50 per hundred.

Excerpted from a brief filed in the Supreme Court of the United States by the NAM as amicus curiae in the Hanson case involving the question of whether federal legislation can override state right-to-work laws.

A LISTING OF SERVICES AND FACILITIES FOR TESTING, APPLIED RESEARCH, ENGINEERING ANALYSES AT ETL. 65 pages, illustrations. Electrical Testing Laboratories, Inc., 2 East End ave., New York 21. Free.

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American Steel Foundries 24, 25
Agency—Erwin, Wasey & Company, Ltd.
Automatic Electric Sales Co. 17
Agency—Proebsting, Taylor, Inc.

Bethlehem Steel Company 1
Agency—Jones & Brakeley, Inc.

Caterpillar Tractor Company 21
Agency—N. W. Ayer & Son, Inc.
Classified Advertisements 55, 56

Edgewater Steel Company 20
Agency—Downing Industrial Advertising
Erman-Howell Division 56

Federal Telephone & Radio Corp. 29
Agency—J. M. Mathes, Inc.
Frank, M. K. 56

General American Transportation Corp. 18
Agency—Weiss & Geller, Inc.
General Electric Company 50, 51
Agency—G. M. Basford Company
General Railway Signal Company ..... Back Cover
Gould National Batteries, Inc. 28
Agency—Hutchins Adv. Co.
Graybar Electric Co., Inc. 54
Agency—G. M. Basford Company

Hunt Company, Robert W. 56
Hyatt Bearings, Division, General Motors Corporation 4
Agency—D. P. Brother & Company, Inc.

Industrial Brownhoist Corp. 31
Agency—Price, Tanner & Willox, Inc.
International Harvester Company 14, 15
Agency—Aubrey, Finlay, Marley & Hodgson, Inc.
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Oakite Products, Inc. 23
Agency—Marsteller, Rickard, Gebhardt & Reed, Inc.
Okonite Company, The 38
Agency—Doyle, Kitchen & McCormick, Inc.

Rail & Industrial Equipment Co. 55
Agency—Gotham-Vladmir Advertising, Inc.
Railway Educational Bureau, The 55
Remington Rand Div., Sperry-Rand Corp. 26
Agency—Leeford Advertising Agency, Inc.
Revere Corporation of America 49
Agency—W. L. Towne Advertising

Smith Inc., L. B. 32
Agency—Michener & O'Connor, Inc.
Standard Car Truck Company 34
Agency—The Stuart Potter Co.
Standard Oil Company of California 6
Agency—Batten, Barton, Durstine & Osborn, Inc.
Star Headlight & Lantern Company 56
Agency—Hutchins Advertising Company
Symington Gould Corporation, The ..Inside Back Cover
Agency—Ed Wolff & Associates

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Union Switch & Signal Div. of Westinghouse Air Brake Co. 2
Agency—Batten, Barton, Durstine & Osborn, Inc.
Unit Truck Corporation ..... Inside Front Cover

Walmsley & Associates, Charles A. 56
Waugh Equipment Company 33
Westinghouse Air Brake Company 19
Agency—Batten, Barton, Durstine & Osborn, Inc.
White Manufacturing Company 48
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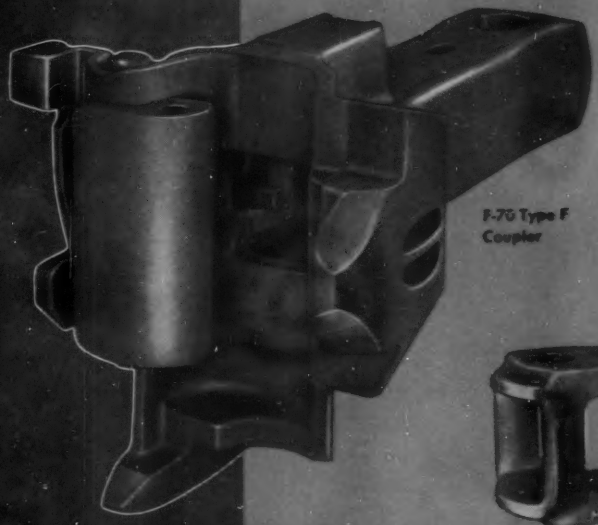
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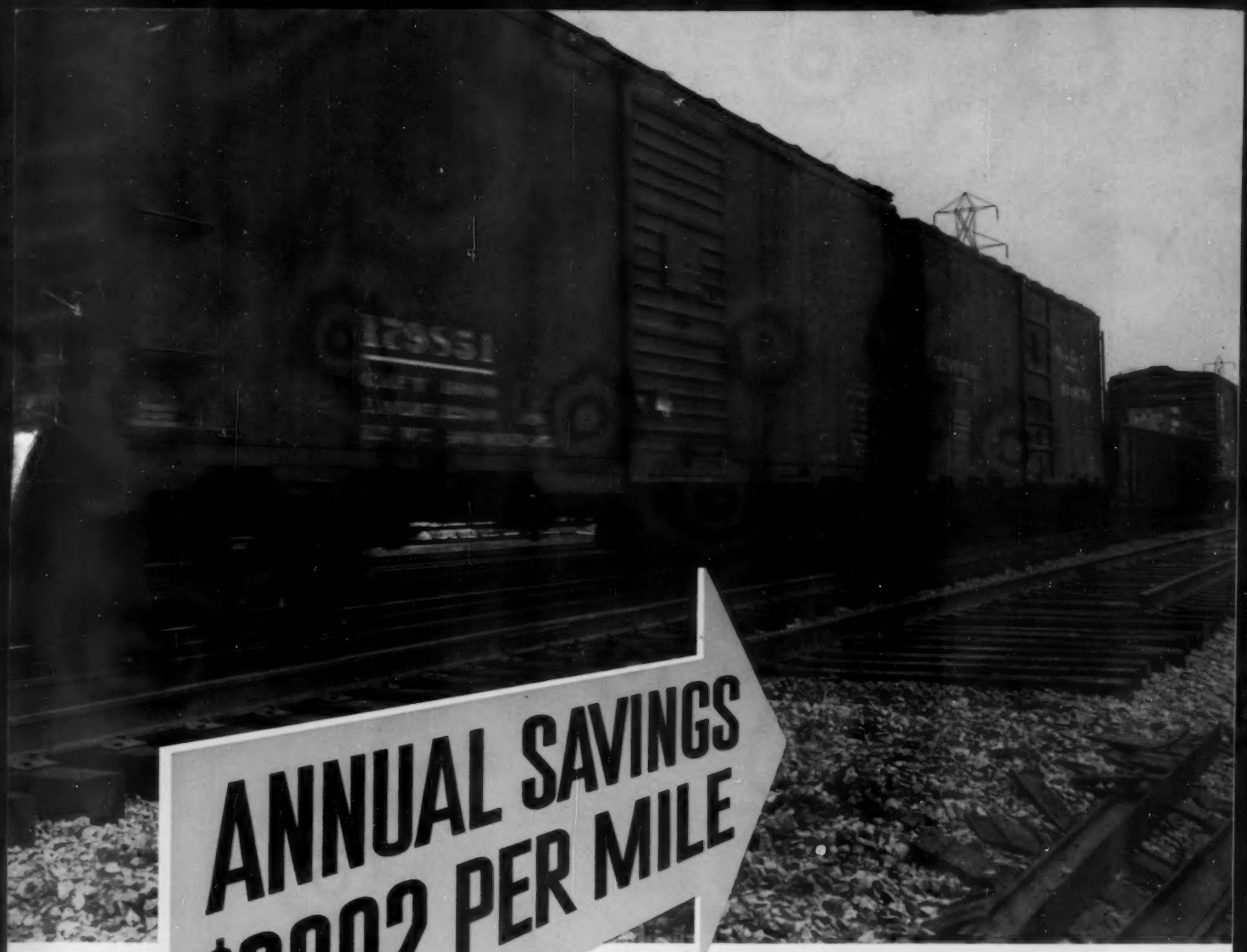

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